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Part First.

ORIGINAL COMMUNICATIONS.

I.—VALEDICTORY ADDRESS AS PRESIDENT OF THE EDINBURGH OBSTETRICAL SOCIETY.

By **Alexander Russell Simpson**, M.D., F.R S.E., Professor of Midwifery and the Diseases of Women and Children in the University of Edinburgh.

(*Delivered to the Edinburgh Obstetrical Society,* 14*th November* 1883.)

Gentlemen,—Before leaving the chair which your kindness two years ago called me for the second time to occupy, it is fitting that I offer you my hearty thanks for the distinction with which you honoured me, and attempt a brief review of the work we have accomplished.

Need of Advance in Teaching and Testing of Students in Obstetrics and Gynecology.

Each time one gives a thought to the work that is being done in the sphere of obstetrics, one is struck with the amount of it as compared with what is done in other departments of medicine. Every general practitioner knows that midwifery patients were among the earliest he was called to visit, and remain the only constant contingent in his visiting list to the end. Attendance on lying-in women and on their children during their early years takes up as much of his time as is required in the treatment of his medical and surgical cases put together. No other class of cases cause him more anxiety. In none can he render more timely or surer help. No wonder that obstetrical societies multiply and flourish; that new obstetrical journals come into existence and survive; that other medical journals, open to receive papers on anatomy, physiology, pathology, materia medica, medical jurisprudence, surgery, and practice of physic,—in short, to all the branches of a medical curriculum,—that such journals contain a proportion of obstetric material equal, if we may judge from what we find in the pages of our *Edinburgh Medical Journal*, to more than a third of the whole. In my last bound volume (1881–82), of the 630 pages occupied with original articles, 233 are devoted to the department of obstetrics. No wonder that the volumes of our Society's Transactions for the last two years equal, and even exceed, in bulk those of the Transactions of the Medico-Chirurgical Society.

The great wonder always is that any licensing body can continue to pass men on to general practice who have qualified on nothing more than a three months' course of midwifery. It is time, and more than time, that this anomaly were rectified. It is already time that the universities, at least, should take a step in advance, and provide for the full teaching of this great section of medicine by breaking it up into its two divisions of Obstetrics and Gynecology. There is enough in Midwifery and the Diseases of Children to engage fully the attention of the student during a long winter session; while the Diseases of Women cannot be satisfactorily taught in a systematic course of less than three summer months. I wish the Fellows of the Society would take this matter to avizandum. None can know so well as they how needful it is to make due provision for the teaching of midwifery and the diseases of women and children. None can testify so truly, on the one hand, how large a part of a doctor's time is taken up with it, and, on the other, how imperfect is the student's training, and how inadequate the tests applied to him when he is allowed to qualify. Either obstetricians are a very modest race, or they are too much occupied with the urgent calls of practice, to have time and energy left them to take their due share in the politics of the profession and press to its proper issues the importance of their department. Happily for us, an earlier generation fought its way to a position of equality in professional status with the cultivators of the other sections of the healing art, and were admitted on equal terms to the Fellowships of medical and surgical Colleges and to a place in professorial Faculties. But though the obstetrician meets the physician and the surgeon on a level platform, obstetrics is still treated with a measure of disdain by her elder sisters; old-world prejudice still dogs her steps, and legislation is slow to provide for her requirements. At a time when legislative changes are in prospect, obstetricians should concert to make demand that nothing less than attendance on a full course of one hundred lectures on midwifery and diseases of women and children should be required of candidates for a qualifying title to practise, and that in all the larger universities and schools there should be separate courses of lectures on Obstetrics and Gynecology.

OUR FORTY-FIFTH SESSION.

We begin to-night the forty-fifth Session of our Edinburgh Obstetrical Society. Those of you who have in hand the billet calling this meeting together will see that it is said there to be our forty-third. But the Society held its first session—a brief one of nine meetings—in the early part of 1840. The session of 1840–41 was its second full session; and although, at some period, we have fallen into error in misdating our billets and our volumes of Transactions, the Society has every season had its series of meetings, so that in July last we completed our forty-fourth session.

EARLY WORK IN THE SOCIETY.

In recent times there has been a tendency to give the gynecological precedence over the obstetric section of our subject, so that in some association meetings the programmes of business give but little prospect of much discussion of obstetrics proper. Throughout our history the papers have held to a juster proportion in their themes. Glancing at the minutes of some of the early meetings, one sees that midwifery has full pre-eminence, and occupies itself sometimes with the consideration of a pair of Forceps that for many a subsequent year has been widely used, but was then for the first time exhibited by Dr Ziegler; or with the discussion of the Mechanism of Labour in the flat pelvis, when Mr Sidey anticipates the observations of Michaelis, and describes how he had found, in such a condition, the forehead descending through the brim in advance of the vertex; or with admiring Dr John Reid's Researches into the structure of the uterine mucosa or of the placenta; or with considering the newly invented Cephalotribe, only to condemn it. At the same time gynecology was not overlooked, for already, on the 8th of November 1842, Simpson makes the fruitful "Proposal to Extend our Means of Diagnosis of Diseases of the Womb by the Employment of a Uterine Bougie." Three meetings later he shows Stem Pessaries used for the cure of uterine displacement; and before the session is ended Dr Cumming reads "Two Cases of Retroflexion of the Uterus successfully treated by the introduction and wearing of the form of Pessary described to the Society on a former evening by Dr Simpson—particularly with a view to show the impossibility of diagnosing the precise change in the position of the womb except by the Uterine Bougie, as also to prove that after the first soreness attending the introduction of the pessary had gone off, all the other symptoms seemed to be relieved."

WORK IN THE PAST TWO YEARS—OBSTETRIC SCIENCE.

True to the healthy traditions of our Society, the contributors during the past two years have mainly occupied our time with the consideration of obstetric matters. Sometimes the papers have had to do with the scientific aspects of special questions. Such are Dr Berry Hart's "Note on a Unique Cause of Delay in the Third Stage of Labour," "On Some Points in the Physics of the Bladder and Rectum," and his "Contribution to the Anatomy and Etiology of Rupture of the Peritoneal Portion of the Vagina during Labour;" Dr Halliday Croom's "Observations on the Bladder during the Early Puerperium;" Dr Wm. Turner's "Case illustrating the Importance of Accurate Pelvimetry, with Description of a New Method;" Dr David Lindsay's "Case of Twin with Exomphalos and other Deformities," with which I might join my own papers on "Dystocia from Exomphalos of the Fœtus," and on "Hydramnios, and the Source of the Liquor Amnii."

Perhaps it is in this category that we ought to class the remarkable case recorded by Dr W. J. Kennedy of "Pregnancy in a Woman at the Age of Sixty-Two." Mr Small, the learned librarian of our university, has directed my attention to a record of a similar case in *An Account of the Islands of Orkney*, by the Rev. James Wallace, edited in 1700 by his son James Wallace, M.D. The passage is as follows:—

> "The women are lovely and of a beautiful countenance, and very broody and apt for generation; one Marjory Bimbister, in the parish of Evie, was in the year 1683 brought to bed of a male child in the sixty-third year of her age, as may be seen by the following attestation.
>
> "'We under-subscribers testify and declare that Marjory Bimbister, in the parish of Evie, in Orkney, was in September 1683 untimeously delivered of a male child. Though we have no sure account of her age in our register of baptism, yet many of the parish who are of sixty-four years, and whose age is certainly known, report that to their knowledge she is as old as they. Besides herself remembers that in the year 1631 (which was a year of famine in this country, and from which the common people usually reckon) she was keeping cattle, being then a girl, as she thought, about nine or ten years of age. In the year 1660 she was married to Adam Hourie, to whom about five years after, viz., Anno 1665, she had a child, from which time she was barren till September 1683, when she was delivered of a male child; at which time it is probably thought, both by her neighbours and nearest relations, that she was at least about sixty-two or sixty-three years.
>
> '*Sic subscribitur*,
> JA. GRAHAME, *Minister*,
> WILL. BALLENDEN,
> EDWARD SINCLAIR, *Clerk*,
> WILL. HALCRO.'"

This Orkney dame, though not so "broody" as Dr Kennedy's patient, who had given birth, as the Fellows may remember, to twenty-one full-time children, seems to have given birth to her last child at as nearly as possible the same advanced period of life.

PRACTICAL MIDWIFERY.

The greater number of the papers, as was to be expected in a Society every member of which is busily occupied with practice, have had direct bearing on practical midwifery. Thus we had brought before us a "Case of Induction of Premature Labour," by Dr T. Goodall Nasmyth; a "Case of Labour Complicated with Acute Nephritis and Eclampsia," by Dr Church; "A Difficult Face Case," by Dr Milne Murray, which, at the suggestion of Dr Hart, led to the collection and tabulation of an interesting group of such cases. There were also communication on "Graviditas Serotina et Præcox," on "Vaginal Enterocele," and on "Dangerous Hæmorrhage from the External Genital Organs during and after Labour," by Dr Peter Young; on "The Umbilical Cord round the Child's Neck as a Cause of Delayed Labour, and sometimes of Infantile Death," by Dr Leith Napier; on "Obstinate Vomiting in Pregnancy," by Dr W. J. Brock; and on "Basilysis" and also on "Axis-Traction Forceps," by myself. It will interest the Fellows of this Society, who, in our discussion as to the value of such forceps, were of one mind in giving a favourable verdict, to note that their opinion is rapidly becoming more widely adopted by the ablest members of the profession. Thus Dr Barnes, the highest authority in London on such a topic, says (*British Medical Journal*, Nov. 3), "That question is really settled by every one who has impartially studied and clinically tested the action of forceps made on Tarnier's principle. The economy of force, and the even distribution of pressure on the soft parts, during extraction, can only be realized by those who have used this admirable instrument." And after referring to his own forceps, of which he proudly and, so far as England is concerned, justly says, "As an instrument adapted for general use it appears to have superseded most others," he adds, "Still it is not an axis-traction forceps; and in difficult cases of arrest at the brim it cannot vie with Tarnier's or A. R. Simpson's modification."

The interesting and important subject of Extra-uterine Pregnancy has been before us on more than one occasion. First we had Dr Freeland Barbour's paper on "Diagnosis of Advanced Extra-Uterine Gestation after the Death of the Fœtus," and Mr C. H. Thatcher's "Case of Tubal Gestation;" and at a later period the important essay on the subject with which we were favoured by our Honorary Fellow, Professor Freund of Strasburg.

Finally, under this category we range Dr A. S. Currie's interesting "Statistics of Two Hundred and Fifty Consecutive Midwifery Cases in Private Practice," and the "Quarterly Reports of the Royal Maternity and Simpson Memorial Hospital" which continue to be furnished by the medical officers of that institution. The value of such a report for any one quarter may not be great; but the mere accumulation of the material of which they are composed continually increases their importance, and their value will be greatly enhanced each time any Fellow of the Society records, like Dr Currie, the results of his private practice, whether in the town or country.

GYNECOLOGY.

A due pre-eminence has thus been given to obstetric themes, but not to the neglect of gynecology. Diseases of women have been treated of, first of all, in two communications which we owe to the kindness of two Russian confrères—in the paper, viz., by Dr Maslovsky "On the Development of Malignant from Non-Malignant Tumours of the Uterus," and by Dr Popow on "Fibromyxoma Duplex Ovariorum." Dr Matthews Duncan favoured us with a contribution on "Fœtid Parametric and Perimetric Abscess." Dr Halliday Croom described and commented on "Two Cases of Atresia Vaginæ." Dr W. L. Reed of Glasgow described and advocated the use of "A New Bivalve Speculum." Dr Currie sent a paper "On the Use of Chian Turpentine in Carcinoma." Dr Milne Murray gave a "Note of a Case of Inversion of the Uterus occurring immediately Post-partum, and resulting in Spontaneous Amputation." Dr Lediard sent a preparation with "Notes of a Case of Ovarian Sarcoma." Dr Smart described "Two Cases of Malformation of the External Genitals." Dr Milne Chapman read a "Case of Double Ovariotomy;" and I treated of "The Uterine Sound," "Extirpation of the Cancerous Uterus through the Vagina," and "Superinvolution of the Uterus."

In this department we have as yet had no statistical reports such as have been welcomed in the last few years in the department of obstetrics. Such gynecological tables may not have the same immediate value as the obstetrical reports; still they might be useful. And when the managers of the Royal Infirmary are beginning—not a day too soon—to agree to the appointment of an Assistant Physician for the Diseases of Women, perhaps the physicians should bethink themselves whether they ought not now to begin to furnish a yearly record of the cases treated in their wards.

PEDIATRICS.

There falls to the obstetrician's care yet another department of the ills to which humanity is heir—the many ills on the inheritance of which he enters at the very threshold of existence. Pediatrics, somehow, never receives all the attention at the hands of our Society which its importance deserves. The number of papers on the diseases of childhood is never any way commensurate with the frequency with which our Fellows are called to deal with them in practice. Yet infantile disease has not been altogether left out of thought. Some of the papers to which I have alluded under the head of obstetrics had a regard also to intra-uterine disease or deformity. Dr Ronaldson gave us the history of a case of Congenital Hernia into the Umbilical Cord, for which he had contrived and successfully carried out a new surgical operation. Dr Bruce, who had previously brought before the Society his Method of Resuscitating the Still-born Child, was able to adduce a fourth case in which his Insufflator had proved serviceable. Dr H. W. Laing sent the preparation of a large Congenital Cystic Tumour from the back of a child's head, accompanied with a history and comments on the case; and I directed the attention of the Society to the value of Credé's method for ensuring Prophylaxis of Ophthalmia Neonatorum.

Here also I may ask whether the energetic physicians of the Sick Children's Hospital could not furnish us with some valuable material gathered from their ward journals.

PATHOLOGICAL COMMITTEE.

But besides the subjects discussed in more formal papers, many matters of interest were brought before the Society in the exhibition of new instruments, of special cases of deformity, and of fresh specimens of various kinds. During the past session the Society has made an important improvement in its constitution in the formation of a Pathological Committee. This committee, which has undertaken to examine and report upon specimens of special interest, has been placed under the convenership of Dr Hart, at whose instance it was established. The reports of this committee will add to the value of future volumes of our Transactions, and will doubtless induce some of the Fellows to preserve and send for exhibition and examination preparations that they might have been ready to throw aside as useless.

ROLL OF FELLOWSHIP.

During the past two years, moreover, the Society has been at pains to make up a more definite roll of Honorary Fellows. It has been agreed to limit the number to forty, the recipients of the honour being chosen from amongst the most distinguished obstetricians of Britain, Europe, and America, and provision is made for filling up blanks that may occur in any session at the penultimate meeting in June. There has been a large accession of Ordinary Fellows, so that, the treasurer informs me, the Society now numbers 327 in all—the largest in its history.

Besides the losses referred to at the commencement of last session, we have to lament the death of our friends Dr Middleton and Dr Miller, Ordinary Fellows of the Society; of Dr Dunbar of Garelochhead, Dr Harvey of Lincoln, Dr Hewan of London, and Dr Stevenson Smith of Siam, Corresponding Fellows; and, most recent of all, of Professor Depaul of Paris, who nearly twenty years ago was elected one of our Honorary Fellows. The immediate successor of the illustrious Baron Dubois, first Professor of Midwifery in the University of Paris, we see Depaul in his youth placed amidst the brilliant galaxy of French accoucheurs who played so great a part in founding, some forty years ago, the science of gynecology. Through a lengthened life we see him diligently labouring to promote the progress of obstetrics. Only two years ago he showed Dr Barbour and myself with delight through the wards of the new Maternity which Government had provided for him. It is touching now to read, in the tribute to his memory by his friend and former assistant Professor Budin, how he died in harness after brief illness, just at the time when he had realized that he had need of rest, and had purchased for himself a property in his native district in the south of France, where he hoped to spend the evening of his days.

VALETE!

The sands of my time for filling this chair are now run out. I have tried to do my best in fulfilling the duties of the office. I carry with me grateful memories of many happy evenings which your kindness has made pleasant and your converse has made profitable. I judge that the Society has done wisely in choosing its new president from among the country brethren who find time, amidst their hard work, to contribute to our Transactions and take part in our debates. It has done well in fixing its choice on one who has already proved his power to do justice to such a position both on its scientific and its social side; and it has crowned for me the gratification which I feel in leaving the chair by giving me as my successor in office one of the friends of my childhood. I know Dr Connel joins me in admiring the Hand that brings us together at this auspicious time—the same that sometimes brought us together long years ago in a seaside cottage looking out upon the Forth where it flows by the shore of our native county of Linlithgow.

II.—STUDY OF A CASE OF MULTIPLE SARCOMATA OF THE SKIN (MYELOMA, MYCOSIS FUNGOIDES, MYCOSIS FONGOIDE, INFLAMMATORY FUNGOID NEOPLASM).

Read at the Fourth Annual Meeting of the American Dermatological Association, Newport, R.I., 30th August 1881.

By JAMES NEVINS HYDE, A.M., M.D., Professor of Skin and Venereal Diseases, Rush Medical College, Chicago.

ON the 11th of April 1881, Mr J. C. presented himself for treatment at the Skin and Venereal Clinic, Rush Medical College, Chicago. It appeared that he took this step in consequence of representations made to him by his friends, and not because he sought to receive gratuitous medical attention. Being subsequently visited in his own apartments, it became evident that he was capable of providing himself with all the comforts and many of the luxuries of living. He occupied commodious chambers, airy, well-lighted, and even elegantly furnished. He had all the facilities for bathing; and his meals were served in his private parlour from a diet-list as extensive as any the markets afforded. It is proper to make this statement, in order that the excellent hygienic surroundings of the patient may be properly appreciated.

At the date named above, the following history of his case was obtained:—He had been born in Belgian Luxembourg, was 46 years of age, unmarried, and had been connected in business, during a period of sixteen consecutive years, with a well-established commercial firm of his city. In their interest, he had been engaged in almost continuous travel, and had thus acquired some property and a reputation as a successful man in trade. His family history was well known to him. His father, who had been a healthy man all his life, with the single exception of a severe attack of rheumatism at the age of 30, died in his 72nd year from the infirmities of age. His mother died, aged 58, of what was supposed to be an attack of paralysis. Two brothers were living in excellent health, as also one sister. One female child of his parents had died in its infancy of some unknown disorder. No member of the family had, so far as he could tell, ever suffered from an inveterate disease of the skin, even in the second preceding generation. As has been said, the patient had been an extensive traveller, both in Europe and America, having visited almost every corner of the two continents in the pursuit of his business. As to venereal antecedents, he admitted having but a single disorder, an attack of blennorrhagia, at the age of 27, from which he had recovered without sequelæ of any sort.

Up to six years ago he considered himself a perfectly healthy man, and had never suffered from any disease of consequence. At that time he began to complain of a moderate degree of itching on the inside of his elbows, though no affection of the skin could be there recognised. Subsequently he noticed the same sensation over the surface of his back, and consulted a physician of his city, who made certain local applications with a view to its relief, which, however, seemed only to aggravate the trouble. He thought that, at the time of this occurrence, the skin was occasionally raised in slightly thickened patches; and that the very moderate itching was, in such places, more noticeable. The same conditions were finally to be appreciated in the lower extremities, though never, as he stated, below the level of the tops of the boots. He then determined to make a special effort to rid himself of the trouble, and with that end in view visited the hot springs of Arkansas. The desired result was in this way obtained. He returned to Chicago, apparently relieved of his disease; and remembers that up to that date he had never noticed the sensations of which he complained upon his face. This was in the fall of 1876. Soon after this he noticed a small red spot on the outer surface of the ham, which was succeeded by others on various parts of the body, these now, for the first time in his history, occurring on his face, more especially on the forehead. The general surface of the body was, however, at this time comparatively free from any traces of the disease. Like the lesions observed in his previous attack, these spots were now accompanied by a very moderate degree of itching; and a slight desquamation from the surface occurred, so that he could occasionally find a small quantity of scales in his bed when he arose in the morning.

He then consulted several of the physicians of his city, who have more or less had him in charge up to the present time. He knows that he has been subjected to a mercurial course; that he has taken the iodide of potassium and arsenic for variable periods of time; and that, through it all, his skin disease has been variable in its course, sometimes a little better, and again rather worse. By the latter part of January 1881, he began to notice that small tumours were forming on the surface of his body, those which are now evident. He gave no clue to any visceral disorder. His functions were naturally performed. His appetite was, he said, good; and his dejections regular and natural. His strength was unabated; but his appearance was such that very lately, only within a few weeks, he had discontinued his regular business avocations.

When examined he was found to be an intelligent and well-nourished man, of medium stature, weighing about 180 lbs. He moved about the amphitheatre without difficulty, spoke with widely-opened eyes, divested himself of his clothing without assistance, and his voice betrayed no huskiness or other alteration of natural sound. His mucous surfaces, accessible to the view, were quite normal in appearance; and, in brief, his disorder seemed to be strictly limited to the skin. With respect to the latter, it is merely requisite to note here that it was extensively infiltrated in areas over the surface of the body, not diffusely, but in palm-sized patches, the temperature of these patches being noticeably elevated above that of the adjacent integument. Interspersed between these infiltrated regions, on the face, scalp, chest, back, genitals, and limbs, were a large number of tubercles, pea to walnut-sized, none of them exhibiting the slightest tendency to degenerative changes. A more minute description of the condition of the skin will follow, as the result of later examinations renders this possible. Enough is at this point detailed to supply the basis for an estimate of the relative rapidity of the course of the disease subsequent to the date of this first examination. It was stated that for some time previously he had been taking an iodide of potassium in solution, and it seemed quite necessary to eliminate from the case all features which such a course might have imprinted upon it before coming to a definite conclusion respecting its nature. The exceptional and singular features of the skin would certainly seem to have justified such action.

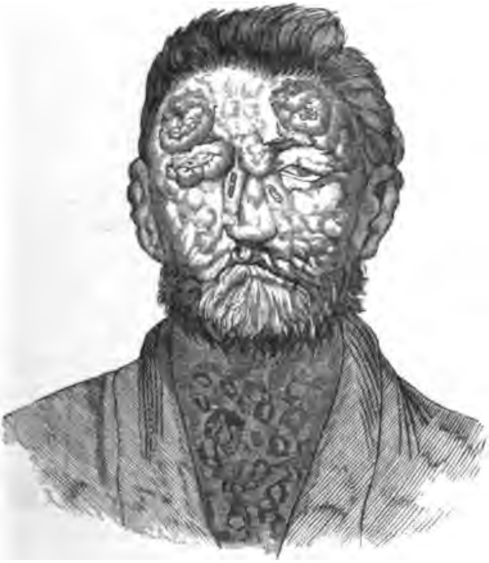
Subsequent examinations were made at the residence of the patient, and it may be here added that he was regularly afterward under my surveillance. In order to avoid what might prove to be a tedious repetition of such details as my note-book supplies, I propose to give a tolerably minute description of the condition of the same patient on the 11th of the subsequent June, exactly two months after the date of his first presentation at the clinic. By this means it may be possible to convey some idea of the relative rapidity with which the disease actually progressed.

11*th June* 1881.—On this day, in the presence of my colleague, Dr Fredk. W. Mercer of Chicago, I made a careful examination of the person of Mr C., with results detailed as follows:—

The patient states that his appetite is excellent. His tongue is quite clean, and his mucous surfaces apparently unaffected. His voice is unaltered. His stools, occasionally under the stimulus of a gentle saline laxative, in all respects normal. He has been taking in the way of medicine only iron, quinine, and other roborants, while his dietary is of the amplest and most generous character, carefully selected with a view to sustaining the patient's strength. With his meals he usually takes a moderate quantity of beer, or claret and water. His complaint is chiefly of loss of sleep. He states that he spends entire nights in wakefulness, and lies exhausted on his bed during a great portion of the ensuing day. An hypnotic solution of morphia and the potassic bromide has been used at times to correct this trouble, but without very satisfactory results. There have been occasional febrile exacerbations and chills of a mild grade. He is placed daily in baths of carbolized water, made slightly demulcent by squeezing bran into the lotion.

He is now not only confined to his room, which he has not left for weeks, but really quite ready to take finally to his bed. His weakness is extreme, preventing his ascending the stairs to his apartments. His chambers are pervaded with a stench from which there is small escape by the free use of disinfectants and ventilation. The odour exhales constantly from his person, and can be recognised in the articles which have been employed about it.

His bed clothing, though daily changed, is soiled with offensive discharges from the surface of his body; and the clothing worn next the skin requires change several times during the day, for a similar reason. The secretions referred to evidently ooze through the linen and cotton garments, and thus stain and stiffen the outer surface of each.



The head and face of the unfortunate man are disfigured (*see cut*) to such an extent as to render the features in the highest degree repulsive. The thin and short-clipped hairs of the scalp rise from its surface in a dry lustreless crop, of a washed-out brown shade through which, if the fingers be passed, a few tubercles can be here and there recognised, usually not larger than a small bean, none of which seem to have entered upon the process of involution elsewhere recognised. One, walnut-sized, slightly reddish and glazed lesion, rests upon the scalp near the line of junction of the latter with the forehead. These scalp lesions are, however, for the most part uncoloured, and have the hue of the dry, unirritated vertex.

The brow is the seat of numerous tubercles and tumours, some distinct, but for the greater part massed together in two readily distinguished clusters, one on either side; that on the right, involving the lower part of the forehead and the brow of the same side, measures two and a half by two centimetres. It has the form of a roundish, irregularly defined tumour, with lobulations indicating the lines of union of its several component parts. The few, barely distinguishable hairs of the brow are matted together over the sides of the tumour. It is penetrated by a circular-based conical ulcer, the apex pointing directly to the supra-orbital ridge; but as yet the whole mass is unattached and freely movable over the bone. This crateriform excavation has developed within one week, and must be progressing at a rapid rate. The patient states that its course is that of the other ulcerating tumours of his body, which are at many points simultaneously breaking down and thus furnishing the source of the discharges which soil his linen, and of the fetid odour which he exhales. He reports that these degenerating masses seem to burst, but that there is no gush of matter from a central depôt. There is merely a moderate discharge, the secretion being mingled with a little blood, and at once a loss of substance can be noticed at the summit of the elevation. It is evident that this process of degeneration is proceeding from without inward. The secretion, when examined, is seen to be scanty, nowhere having the characteristics of pus, is slightly inspissated, and tends to dry in thin scabs along the line of the tumours where involution is progressing.

On the left side of the brow the cluster of lesions is still larger than that just described. Its base is as large as the palm of an infant's hand; it has a papillomatous appearance, with wart-like projections from the summit, suggesting the comb of the cock. The colour of all the tubercles and tumours of the brow is the same, a dull reddish-brown, being slightly deeper than the colour of the similar lesions elsewhere on the body, which, it may be here said, have a lighter reddish and slightly glazed hue. Between the main masses of the neoplasms, described upon the brow, there are smaller tubercles of more or less distinct individuality, with limited infiltrations of the skin between, where a moderate degree of desquamation can be recognised. The larger lesions are smeared with the thin secretion already described.

Vision is unimpaired so far as relates to the organs of sight, but the patient is almost completely blind from ptosis. This is complete on the right side, while on the left, the muscles can raise the upper lid so as to expose merely a narrow ellipse of the inferior limb of the cornea and adjacent sclerotica. This ptosis is exclusively due to the weight of the palpebral tumours, and the difference between the two sides, to the greater development and consequent weight of that on the right, which measures two centimetres in each direction. These masses are quite like the frontal clusters, their free surfaces being covered with thin scabs, formed of the dried matter secreted upon each. The lashes, like the hairs in other parts of the body, are thinned, lustreless, and so loosened in their follicles as to fall readily. The cheeks, nose, and lips, are misshapen from similar growths, which need not be further particularly described in each locality, as the general features of all are everywhere similar. The line of the nose is chiefly broken by two nut-sized masses, the larger below on the right, and the smaller above and to the left, where there is a very slight tendency to pedunculation. Between the two is a large mass, four and five centimetres in diameter, which is in full process of involution, with accompanying thin, flat, dryish, and slightly attached scab, covering a grayish-hued ulcer of corresponding dimensions, but more superficial than those on the forehead.

The line of the vermilion border of the lips is well-nigh indistinguishable from similar deforming masses, covered with a thin matter, and attached to both the upper and the lower lips. The thin hairs of the moustache and beard cover many of these; and it is noticeable that the uneven, tuberculated, pouting, and matter-smeared lips are slightly eroded on their oral aspects, doubtless in consequence of the difficulty of passing food between them, and the friction to which they are, by this process, exposed. The patient complains of some pain here, and this is the only part of which such a complaint is entered, though his attendants report that he is in great distress at night from pain induced by the extensively changed condition of his skin. Generally, however, it may be said that the tubercles and tumours may be freely handled without the production of pain. They are quite firm to the touch, bleed freely when divided by the knife, and when for a brief time subjected to firm pressure, acquire an exsanguinated look, this appearance rapidly yielding to the persistent, brownish-red, faintly-glazed colour, as soon as the pressure is withdrawn.

The ears are completely transformed into tuberculated, stiff, infiltrated appendages, the prominences upon which, occurring as they do with a certain degree of regularity, suggest a symmetrical disposition. Along the outer edge of the pinna, where the organs touch the pillow in the reclining posture, there is the same involution progressing as over the face. A few lesions in this part are breaking down, and the scab-covered losses of tissue are the evident result. The external meatus is unaffected, and there is no otitis externa.

The aspect of the head in general, with its frontal tumours, lobulated nose, pendulous cheeks, knobby lips, and tuberculated ears projecting from the temples, produces a peculiarly repulsive effect upon the eye of the observer.

The trunk, both in its anterior and posterior aspects, is seen to be covered with numerous brighter red, somewhat glossy, tubercles and tumours, thickly and rather regularly distributed. This regularity is so uniform as to produce a certain degree of symmetry. The lesions vary in size from a large bean to a large tomato, and the skin between them is in places reddened, infiltrated, and covered here and there with thin, light, not very friable, and attached scales. These scales are not shed from the surface as readily as in most scaling disorders of the integument, and are by no means a noticeable feature about the clothing and bed of the patient. It should also be added, that between the infiltrated patches and the smaller and larger lesions found on the body, there are also interspersed areas of surface where there is no objective evidence of the existence of any disease.

The tubercles and tumours of the trunk usually spring from broad attachments, and have no tendency to pedunculation. The smaller are suggestive of rather abundant infiltration, limited in extent, definite in contour, and circular in outline; while the abundant proliferation of tissue in the larger produces, in some instances, the effect of surpassing the original limits of the base, so that the tumour projects beyond these, without, however, becoming so pendulous as to drag upon and thus lengthen and narrow the base till a true pedicle is formed. The genitals are invaded by similar growths. The inguinal regions are hidden between masses of swollen tissue, tubercles, and tumours, so that it is difficult to pronounce upon the existence of an adenopathy in this region.

The upper extremities share in all the features described above. The most noticeable fact here is the swelling of the hands, much more pronounced upon the right side. This is true especially of the dorsum of the organ, which strongly resembles a thickly-padded cushion, the infiltrated skin over it being of a grayish tint, and covered with scales even finer than those seen upon the trunk. This swelling has rendered the hand quite useless. Tubercles here are mere localized infiltrations, of the character noted in the smaller variety of lesions described above. The progressive relative infrequency of their occurrence below the line of the circumference at the elbows is readily recognised. The palms are singularly marked by irregular losses of the epidermis, suggesting the milder forms of the papular syphiloderm of the same part, before the occurrence of either fissure or ulceration. There is a distinct grayish and almost silvery hue of the skin of the palms, without any trace of the characteristic shade of colour developed in the syphiloderm of the same region. The left hand is less swollen, though the conditions noted upon the right side are all present in a less pronounced degree.

The pathological state of the lower extremities is very like that just described. They are much swollen throughout, the swelling being greater about the leg than the thigh, and the helplessness of the patient is largely due to this cause. As the lower limbs rest upon the bed, their elephantiasic aspect is perhaps the most striking of the features which the eye is first to recognise. The patient is under the necessity of raising each with the aid of two hands, in order to move it into any desired position, and this act, accomplished by the aid of the crippled upper extremities, is indeed difficult. Motion at the knees and ankles, in consequence of this swelling, is exceedingly limited. The tumours and tubercles characteristic of the disease are here also in profuse development, though of less frequency below the level of the line usually reached by the tops of the boots. One of the largest tumours upon the body is seen on the outer face of the left thigh, in its upper third. Its centre is the seat of an oblong, rather shallow ulcer, covered with a light, thin, not very adherent crust, beneath which is a corresponding loss of tissue, the resulting ulcer having an indolent, grayish-hued floor and sides. The tumour is of the size of the fully developed tomato, and was selected as the source of the specimen removed at this date for microscopical examination. With the aid of Dr Mercer, I excised a portion about two centimetres in length and one in thickness, which was placed upon a freezing microtome, and the thin sections then made examined with results to be described later.

Another large-sized tumour is seen on the right leg, just below the inner border of the popliteal space. It resembles somewhat the tumour described on the left side of the brow, having a papillomatous vegetating summit, a base as large as the palm of a child's hand, and a secretion on the surface produced by indolent ulcerations here and there in the mass. The swelling of the lower limbs is, as has been said, most distinct at the ankles, the skin over them and the feet being infiltrated in patches, grayish-tinted, and slightly scaling. The fingers are clubbed, as also the toes, this condition being in part due to the swelling. The nails of both fingers and toes are thickened and roughened. One of the fingers bears a corrugated, discoloured, and exfoliating nail, which the patient supposes to have been injured accidentally.

Surveying the surface as a whole, it is noticeable that there are no anæsthetic patches of any part. Though the patient thought his tumours were insensitive, he speedily winced when these were either roughly handled, pricked, or cut. There were no atrophic patches, pigmented on the reverse, and no cicatrices of any region; and it will be remembered that there was no history of bullæ at any time. There was no tendency to bronzing of the surface either of the shins or elsewhere, and no irregular distribution of pigment. No hyperæsthesia was anywhere recognised, and there was no ulceration of the skin, the degenerative process being in all instances limited to the body of the tubercles and tumours. The mucous surfaces were, when examined, free from all lesions, there was no sign of any visceral involvement, and no destructive process had proceeded to such an extent as to threaten the integrity of bones or joints.

It is proper to add, that although the friends of the patient had been warned some time before this date of the probable fatal issue, he himself had been kept ignorant of the dangerous character of the disease from which he was suffering.

The two pictures of the patient, which I have thus attempted to place in contrast, will serve to furnish a basis for estimating the relative degree of rapidity with which his disease was progressing. If his statements respecting his condition were to be trusted, five months before this last date there were no tubercles on the surface of the body; and their abundant development had been accomplished altogether since that time. Whatever allowance it may be proper to make for the accuracy of this statement, coming as it does from a source which is not always trustworthy—the lips of the patient—certainly the disease in question progressed rapidly under my observation. The degree of this rapidity it is well-nigh impossible to register by any standard; and I have therefore preferred to convey an approximate idea of it in the manner already seen. Personal examinations of this patient, made at intervals of but a few days, disclosed the fact that new tumours were constantly forming, older growths developing to the average size already noted, few surpassing this; and, the maximum of development attained, involution speedily followed. The weakness of the patient, progressing as it did with proportionate rapidity, soon became an important factor in this involution process, for the more the unfortunate man was, by the sheer force of his bodily weakness, compelled to assume and retain a single recumbent position, the greater was the continuous pressure upon the totality of tumours existing upon the posterior aspect of the body, and the speedier their response to this pressure in the formation of ulcer, discharge, scab, pain, and the systemic consequences of this gigantic process. Sleep became rarer, digestion slowly impaired, and nutrition correspondingly imperfect. In brief, death was threatened by exhaustion.

For the purpose of following this history to its conclusion, I add merely a few notes selected from the record at the bedside.

20th June.—The patient is discovered in bed, his mind unclouded, but his mental state insupportably wretched from diminishing hopes of relief. He is so weak and helpless that his threat of suicide is vain. The window screens are insufficient to shield him from the voracity of the flies, attracted by the stench, and the patient is therefore constantly enveloped in netting. The air-pillows upon which he reclines are insufficient to prevent the breaking down of the tubercles and tumours in the back, though the same process is visible in all regions of the body. He now complains bitterly of the resulting pain, which an anodyne but partially relieves. The tumour from which a portion was excised last week is in no worse condition than the others. Its central ulcer is possibly less distinctly defined, and involution does not seem to have been hastened by the treatment to which it was subjected. The swelling of the extremities, especially of the lower, is now enormous, and the legs are elephantiasic in size and appearance. The chaulmoogra oil, which he has been taking in emulsion in ten-drop doses, does not distress the stomach. Externally, in the strength of a drachm to the ounce of cold cream, it has been used experimentally over a few lesions, without any appreciable effect.

27th June.—Helplessness, pain, enormous distension of the lower extremities, integument covered with ulcerations, grayish-hued, and thinly secreting. An ulcer as large as the palm of a man's hand discovered on the outer aspect of the right arm, where several lesions seem to have coalesced. He asks to have this member amputated. His nutriment now consists merely of a small quantity of milk. Mental condition unclouded, but full of horror. The tubercles and tumours seem to assume a more purplish tint than that heretofore noted, those upon the face seeming to have slightly subsided, possibly in consequence of the fact that the patient has been propped up for a brief time in his bed. The limbs are useless from tumefaction and ulceration. Slight support is afforded by bandaging the lower extremities. The sponging of the surfaces of the body, several times daily, is assiduously practised by his attendants, and no means of contributing to his comfort are neglected. The temperature is now slowly rising, being registered at 101° with the thermometer in the mouth.

8th July.—After the date last given, the patient's condition did not materially change in any feature of its speedy progression and aggravation, till within twenty-four hours, when a change became imminent. This afternoon, at 4 P.M., he becomes unconscious. The swelling of the face and limbs is subsiding, the colour of the lesions of the surface is less livid, the discharges less abundant. All pathological processes are evidently becoming supplanted by the general impending dissolution. The patient lies on his back, breathing rapidly and superficially, in a muttering delirium. The traces of the low fever described above are still evident in the temperature.

9th July.—Death at 6.30 P.M. The secret fraternity of which patient was a member at once assumed charge of his body, and absolutely refused further examination of it. They were, however, ignorant of the malady from which the patient had suffered. The appearance of the face post-mortem was that of pallor, the tumours losing their brownish-red hue, but still persisting in volume and shape, presenting thus an accurate representation, colour only excepted, of the conditions noted in life.

The sections of the tumours, prepared by my friend Dr F. W. Mercer, and which I have the pleasure of showing you, were stained, some with eosine, and some with ammo-carmine, after which they were mounted in glycerine jelly.

Under a high angle half-inch objective, there was found absence of characteristic structure of the skin. Under a one-tenth inch immersion objective, the sections were seen to be made up of elements, fusiform in shape, having several nuclei, the connective tissue proper being entirely replaced by the new formation. The obliteration of the hair follicles and sebaceous glands was complete, not a trace of either being discoverable in any of the sections examined. No pigment was visible in any part.

My friend, Dr C. Heitzmann, having subsequently made a careful examination of these slides, was kind enough to give me the following as the result of his study:—

"The tumour, of which you have sent me sections mounted on two slides, consists almost exclusively of globular elements, either loosely attached to each other, or clustered together in heaps, without a distinct separating cement-substance. The elements exhibit themselves in small size, being shining and homogeneous, or they are nucleated and often supplied with two or more nuclei. The connective-tissue frame is extremely scanty, and seen mostly in a reticular arrangement, the reticulum exhibiting oblong nuclei at the points of intersection. Only a small portion of the frame-work has reached the fibrous structure, while most of the reticulum is composed of oblong and spindle-shaped protoplasmic bodies.

"The diagnosis is evidently round-celled sarcoma of Virchow, globo-myeloma of my system. Such tumours rarely ulcerate, and when occurring in the skin are particularly liable to this accident."

With the evidence thus furnished by the microscope, it is clear that the disease in question is that included under the several titles sarcoma, inflammatory fungoid neoplasm,[1] multiple pigmented idiopathic sarcoma, mycosis fungoides, *mycosis fungoide*, myeloma (Heitzmann), etc., whose general characteristics have been well described by the author last named.[2]

"Clinically considered," he remarks, "the more rapid the growth the more malignant the nature of the tumour, the worst types attaining an enormous size in the course of a few months. The growth is, as a rule, accompanied by pain, which is the more excruciating the larger the nerve-supply of the affected part, or the tissue pressed upon by the tumour. Ulceration is not the rule in myeloma, but rather the exception. Its capability of reproducing its kind in internal organs is very marked, especially in the lungs, the liver, the spleen, and the kidneys. It has a predilection for childhood and for youth."

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[1] Duhring, *Geber*.

[2] *Microscopical Morphology of the Human Body in Health and Disease*, New York, 1883, p. 492.

In the present instance the pain was largely due to the fact of the very general dispersion of the tumours over the surface of the body, some of these growths being thus necessarily in contact with foreign objects in every possible posture of the body. There was here also a marked degree of uniformity in the maximum of development attained by the larger lesions, no one of the latter reaching the enormous dimensions occasionally noted. The extent to which ulceration progressed in some of the tumours is described above. In the absence of a post-mortem examination, it cannot be declared certainly what lesions, if any, had developed in the viscera, but it can scarcely be doubted that some changes of this character would have been determined in a careful necropsy.

Among the reports of similar cases, rare indeed, it may be said in passing, is that lately recorded by Mannino.[1] His patient was 24 years old, with an early history of a peri-anal phlegmon, adenopathy, and pemphigoid eruption. At the twentieth year the disease began with the development of pruritus, maculæ, elevations of the surface, rhagades, superficial ulcerations, etc., accompanied at times by marked pain, and finally resulting in the formation of firm tumours, superficially ulcerating, 8 to 16 centimetres in circumference, situated for the most part on the scrotum and sacral region. The glands of the groin were enormously enlarged. A microscopical examination of sections of these new growths fully confirmed the diagnosis. It is interesting to note in this connexion that the patient at one time during the course of his disease suffered from a psoriasis, while in the case of J. C., given above, there was a no less clear history of antecedent eczema. It certainly seems probable that any precedent simple cutaneous disorder may awaken in the skin a tendency to malignant formations in a predisposed subject.

In the cases of multiple pigmented sarcoma of the skin, reported by Kaposi, the disease was first noticed upon the sole and dorsum of the foot, or the corresponding parts of the hands. Rarely numerous, the tumours also presented, as a rule, a central pigmented depression, which is described as characteristic. In the chapter on lepra by the same author, in his treatise on the skin, he states that he has observed a case of sarcoma pigmentodes which bore a greater resemblance to lepra tuberculosa than did even lupus or syphilis, a remark which would certainly suggest a careful study of the distinctive differences between the disorders considered.

In the cases recorded by Kaposi, not only were the lesions first seen upon the sole and dorsum of the feet and subsequently upon the corresponding portions of the hands, it is also stated that the development was most abundant in these parts. It will be remembered that in the case now reported there was a marked infrequency of lesions below the line reached usually by the tops of the boots, and below also the elbows on the upper extremity.

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[1] *Giorn. Ital. delle Mal. Ven. e della Pel.*, 1882, p. 348.

In Wigglesworth's case[1] there were bluish-red unlobulated lumps, adherent to the skin, slightly elastic, smooth, without fissure or ulceration, on the arms, over the eye-brows, on the back of the neck, and over the surface of the breast, back, thighs, nates, and belly, the hands and feet not being involved. Microscopically, little if any pigment was discovered. The tumours were described by the author as "large-celled myxo-sarcoma," the large globo-myeloma of Heitzmann.

In Port's case of multiple sarcoma of the skin,[2] there were weeping condylomatous patches, giving origin to pinkish, soft, fungous, profusely secreting tumours, chiefly about the neck and clavicles. There was no adenopathy, and a fatal result occurred in three months after the date of the author's observations. The case is supposed by Wigglesworth to be one of lympho-sarcoma, the "mycosis fungoides" of the French school.

Even knowing the relative rarity of the disease thus described by these gentlemen, it has been a matter of surprise to me that a somewhat careful examination of the periodical literature of dermatology should have furnished the record of so small a number of cases. In none of these to which I have had access was there a resemblance to that here considered, in the matter of the extraordinary multiplicity of lesions, and their arrangement so as to produce the species of facial deformity which is so nearly like that regarded as characteristic of lepra.

As regards fibromata, it should be observed, first, that they are of less uniform measurement than those under discussion, ranging as they do in size from that of a bean to tumours weighing several pounds, covered usually by an unaffected integument, or with skin varying from lighter to deep cyanotic shades; and, second, that when hundreds of these lesions are developed upon the surface of the body, an opportunity is usually afforded of studying the features of typical pendulous fibromata in at least a few of the growths. Here we find that no single tumour in any degree resembled the type of the disease which is commonly regarded as characteristic. Lastly, in multiple fibromata, we should not expect to find the integument between the lesions affected with infiltration, and, though the larger of such tumours may go on to form stinking ulcerations of the surface, this latter result is usually to be attributed to either gravitation or friction, influences whose importance on the face of any affected individual would be very slight.

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[1] *Arch. of Derm.*, 1876, vol. ii., No. 11, p. 97.

[2] *Deutsch. Archiv f. Klin. Med.*, Bd. xii. p. 134, 1873.

With reference to multiple carcinomata, it is to be noted that the lesions described above, with respect to their multiplicity, colour, situation, mode of involution, and resulting ulcerations, in no respect recalled the features of the varieties of carcinoma of the skin which, moreover, are not observed in such general distribution over the surface.

It is unnecessary to dwell upon the distinctive differences between the symptoms here given and those which result from syphilis. There was no tumour nor ulcer upon the body of the patient which in any way resembled the gummata of the skin. Attention has been directed to the palmar and plantar scaling, in localized patches, which might have suggested the early or late syphilodermata of the same region, but the difference in colour, and in the condition of the integument beneath the desquamated epidermis, was sufficient to establish a marked difference between the two maladies.

With respect to the question of lepra, the acuteness and rapidly fatal course of the disease in question would at once suggest the differences between the two maladies, as also the absence of bullæ and anæsthetic patches, of bronzed or glazed surfaces of the facial lesions, and of other signs of the tubercular and anæsthetic forms of leprosy. Acute forms of the disease are, however, both recognised and described by authors, these, however, usually occurring as acute epiphenomena in the course of the usual chronic evolution of the malady. Thus Kaposi[1] remarks:—

"After the prodromal symptoms have lasted for a longer or a shorter period of time, or without such, the eruption of tubercles or superficial infiltrations of the skin and mucous membrane already described makes its appearance in connexion with febrile symptoms of a continued or remittent character. If the fever, which may even assume a typhoid character, persists, the eruption of fresh tubercles and processes leading to softening and disintegration of the old ones, with destruction of the surrounding tissue, follow each other in rapid succession. The disease may then have progressed in the course of a few months to an extent which otherwise would only have resulted after the lapse of many years."

In view of these facts, it cannot be denied that certain forms of sarcoma of the skin and leprosy very much resemble each other. I think few could critically study the features imperfectly pourtrayed in the accompanying cut, and not recognise in them a resemblance to the leontiasic countenance of the leper affected with a pronounced form of the tubercular disease.[2]

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[1] *L. C.*, vol. iv. p. 51.

[2] Compare it, for example, with the illustrations furnished in the excellent *Coloreret Atlas over Spedalskhed* (*Elephantiasis Græcorum*), D. C. Danielssen og Wilhelm Boeck, Bergen, 1847; and the *Photographs, coloured, of Leprosy as it Exists in the Straits Settlements*, London, 1872.

The portrait in oil, from which the cut has been prepared, was taken at the bedside of the patient on the 15th day of June 1881. It is pronounced by the physicians who, by my invitation, saw the patient at nearly this date, an accurate representation of the tumours as they appeared on the face.

III.—FIBROUS TUMOURS IN THE CERVIX UTERI EXPELLED IN AN UNUSUAL MANNER.

Observed by Prof. STADFELDT, Copenhagen, Hon. Fellow of the Edinburgh Obstetrical Society.

I HAVE just now observed the termination of a very unusual course of disease in a female patient suffering from fibrous tumours in the tissue of the cervix uteri, which tumours spontaneously and successively have been expelled *externally*, out from the cervix through the vagina. The first details of the case were published some years ago in a Danish dissertation but little known. As it now appears that the case is likely to have a successful end, I hope that an account of it may have some interest for the Society.

H. B., a widow, aged 44, came under my care in June 1875. She had borne children three times, the youngest child being 21 years old. Suffering for three years from menorrhagia and from difficulty, or often total inability, to pass water, she had consulted different medical men. On making a vaginal examination a large tumour, the size of a full-grown man's head, was found to the back and left of the cervix; the os uteri to the right side. The tumour was, generally speaking, hard, differing in parts, and somewhat elastic, lying in and filling up the brim of the pelvis. It had grown one inch above the whole of the anterior wall of the pelvis, but the lower end was somewhat more pointed and reached nearly to the entrance of the vagina. The sound was easily introduced four inches and a quarter into the cavity of the womb, but much to the right side. The upper part of the vagina was distended by the tumour, and highly stretched in the circumference of the brim. The bladder was pushed upwards, and the urethra elongated so that the sound had to be introduced eight inches before reaching into the bladder. After dilating the cervix with sea-tangle bougies, the finger was introduced, passed easily four inches into the cavity, and confirmed the result of the vaginal examination in regard to the situation and the size of the tumour. The fundus uteri, not much enlarged, was discovered to the right, joined to the tumour.

She came, in the commencement of the year 1876, under my care for operative treatment, when a part of the tumour like a large polypus was expelled out of the vulva. The polypus had a short, very thick pedicle upon the outside of the cervix to the left from the os uteri. The discharge from the vagina was somewhat fetid, and the woman's share of health not good; she suffered from fever, had sickness and loss of appetite. I carried the galvano-caustic wire around the pedicle, and cut through without difficulty. The bleeding was inconsiderable; she made a good and rapid recovery, and the difficulty in passing water and the metrorrhagia were accordingly lessened. The tumour removed had a diameter of three inches and a half. It was an œdematous fibro-myxom, including a single small cystic cavity, the pedicle very muscular.

Several similar tumours were successively expelled from the cervix, always to the outside from this, three times in the course of the first year. The first of these was a polypus as large as a lemon, the second weighing 500 grammes, and the third 686 grammes in weight. Finally, the last, the tenth polypus, was pushed down and removed in September 1880. The state of health before and after the operation was always the same, the bleeding very slight, although the last polypi were removed with the ecraseur, and not with the galvano-caustic wire. The recoveries were always speedy. I keep the ten tumours, preserved in spirits, in our museum, Saxborphianum, and their combined weight is at present 2850 grammes.

In the three years since the removal of the tenth tumour the patient has had good health. The difficulty of passing urine and the menstruation are gone, and from an examination made in August 1883 it seems probable that she is cured of her protracted infirmity. I then found that the large tumour in the cervix had quite disappeared. The lips of the uterus were short, and attached to the back part of the shrunken upper portion of the vagina. The os uteri formed a transverse open slit. The anteflected cervix uteri was somewhat enlarged, and contained a little fibrous tumour in the anterior wall. The patient's health and appearance were quite good.

IV.—NOTES ON A CASE OF CARIO-NECROSIS OF THE UPPER JAW.

By Francis Wm. Grant, M.B., C.M., B.Sc. (Edin.), formerly Senior Demonstrator of Physiology, University of Edinburgh.

The following case, which recently came under my observation, may perhaps be of some interest to readers of this Journal:—

1. *History.*—Mr A. B., æt. 27, married, a chemist by occupation, contracted syphilis on the 18th of August 1879. Previous to this date he seems never to have had any illness beyond those common to childhood. The primary sore (a true Hunterian chancre), it is stated, made its appearance, seven days after connexion, on the fold of the prepuce covering the dorsal surface of the glans penis. This healed, under suitable local treatment,

in a month's time.' An eruption of roseola manifested itself over the trunk and extremities about a fortnight after the appearance of the primary sore.

In the first week of February 1880 a papular, non-itchy eruption, lasting for some months, took the place of the former. The treatment consisted in the administration, three times a day, of half-grain doses of the green iodide of mercury, with five-grain doses of iodide of potassium.

In August of the same year the fauces became swollen and ulcerated. This the patient ascribes to his having got wet and sitting in damp clothes for some hours afterwards.

In December, oval and circular shaped ulcers, varying in size from a threepenny piece to that of a florin, appeared over his trunk and limbs. Some of these had to be cauterized, but the majority yielded to the continued application of citrine and oxide of zinc ointment—many of them leaving cicatrices behind. After the healing of these ulcers the disease ceased to show itself until the beginning of April of the present year. From the patient's immunity from the disease for two years, his medical attendant permitted him to marry at the beginning of 1882. Since the last manifestation of syphilis the patient resumed his daily employment (that of a dispenser), most of which was done in gas-light and in a small, ill-ventilated dispensary.

In April last, deep-seated pains of a rheumatic character set in in the head, and also a dull aching pain and feeling of tension in the region of the hard palate and alveolar processes of the upper jaw. These pains did not yield in the slightest degree to treatment. The gums and periosteum over the hard palate became swollen and painful. Notwithstanding this, there does not appear to have been any accompanying pyrexia. The first upper molar on the right side next became painful and loosened; then the premolars, canine, and incisors of the same side, and finally the incisors, canine, and premolar of the opposite side became similarly affected (eleven of the teeth of the upper jaw having thus suffered). From their great inconvenience, five of these were removed without any trouble, but the first right molar was broken after five unsuccessful attempts at removal. Soon afterwards the pain in the palate and alveolar processes increased in severity, and hæmorrhagic and slightly fœtid pus commenced to well out from the alveoli.

About three weeks later the purulent discharge from the mouth became more markedly fœtid and profuse; and the patient found that he was able, on taking hold of an exposed part of the affected alveolus with a pair of forceps or fingers, to give an up and down movement to nearly the entire hard palate and a corresponding part of the alveolar process of the jaw. He also noticed that when liquids were taken into the mouth they readily found their way into the anterior nares through the necrosed alveoli; and lastly, that small pieces of necrosed bone were from time to time expelled from the nose on sneezing.

2. The patient now for the first time came under my notice.

On examination I found that the alveolar periosteum of the upper jaw had ulcerated, so as to leave exposed a comparatively large surface of the subjacent bone. On laying hold of this with a pair of dissecting forceps, I found that I could communicate an up and down movement to the anterior two-thirds of the palatal and alveolar processes of both superior maxillæ, and that in so doing a large quantity of extremely fœtid pus escaped from the alveoli. Furthermore, on insinuating a probe between the gum and remaining incisor teeth, the bone was found necrosed nearly as high up as the anterior nasal spine. The alveolar processes of both bones and the hard palate were similarly necrosed—the necrosis extending as far back as a line drawn transversely across the palate, from first molar to first molar. The alveolus in relation to the incisor teeth was carious to the touch, and the probe could be passed through this into the anterior nares. In fact, this communication between the oral and nasal cavities was taken advantage of for washing the diseased surface with boric lotion in order to diminish the fœtor of the breath.

3. *Remarks.*—The case is one, then, of cario-necrosis of a large portion of both superior maxillæ, setting in in a person who had two years previously suffered from secondary syphilis. There is a history of two years' immunity from the disease, and a return to what patient considers perfect health; then its recurrence in its tertiary form—this time confining itself, apparently, to the upper jaw. From the symptoms I should have little hesitation in pronouncing it as a case of chronic ostitis (of syphilitic origin) of the upper jaw, which might ultimately have resolved itself, leaving the palate and alveoli slightly thickened; but the history of the case seems clearly to show that the attempted extraction of a tooth from a chronically inflamed jaw set up an acute inflammatory action in the bone—into the Haversian canals of which the inflammatory products would be so rapidly effused as to cut off entirely the periosteal supply of blood to the bone, and thus to occasion its necrosis. The symptoms point to this as being the probable series of events. The discharge of small portions of necrosed bone from the anterior nares seems to indicate that the disease has also implicated either the vomer or spongy bones, or perhaps both. So far no operative treatment has been had recourse to. No doubt the first thing to be done will be to remove the dead bone; but as this might be followed by marked facial disfigurement, I have hesitated to interfere until some artificial contrivance in the shape of a palate and alveolar process be made, which might with some degree of success be at once substituted on the removal of the diseased bone.

V. — THE DIAGNOSTIC AND PROGNOSTIC VALUE OF THE INITIAL RASHES OF SMALLPOX.

By ROGER M'NEILL, M.D., Colonsay.

(*Continued from page* 443.)

Diagnostic Value.—The diseases for which the initial rashes of smallpox may be mistaken are numerous. They have been mistaken for measles and scarlet fever by eminent men. In considering the diagnostic value, it is not only necessary to know the history, characters, and varieties of the rashes themselves, but also of the diseases from which they are to be distinguished. Thomas[1] states that now and then an initial erythematous rash is met with in scarlet fever that is more or less diffused, not entirely transitory, and may cover the whole body. At page 207 he states that the rash of scarlet fever sometimes deviates from the general rule that it may be developed on the trunk alone or only on the face and neck and extremities, or only on a portion of the latter. He also states that the degree of redness may vary from a pale red to a dark scarlet red, and that a somewhat bluish redness appears when the respiration is difficult (p. 204). An initial rash has also been seen to precede the eruption of typhus fever like a pink flush, disappearing on pressure, and apparently due to hyperæmia.[2] The ordinary eruption of typhus fever sometimes appears as early as the third or fourth day, and closely resembles measles.[3] Sir William Jenner[4] gives an instance where an initial rash and sore throat existed in a case of typhoid fever. Murchison[5] states that in cases of enteric fever the appearance of lenticular spots is sometimes preceded for two or three days by a delicate scarlet rash all over the body, disappearing on pressure. Dr M'Combie, of Deptford Fever Hospital, informed me that he saw one case which presented a similar rash. Beaumler[6] mentions the existence of a similar rash in enteric fever. In relapsing fever a large number of authorities testify to the existence of an initial rash. Wyss and Bock noticed an initial rash in an epidemic of this fever at Breslau in 1868.[7] Dr Claud Muirhead published two cases in the *Edinburgh Medical Journal*, July 1870,—one a doubtful case of relapsing fever, with rose-coloured spots over the abdomen and back, rather larger than those usually observed in typhoid fever; the other an undoubted case of relapsing fever, on whom appeared on the fourth day a profusely copious rash over the whole body. It was of a rosy red, distinctly papular, faded on pressure, and was elevated considerably above the surface. It lasted for three days. There was no desquamation or pigmentation. Dr Tennent published 24 cases in the *Glasgow Medical Journal,* May 1871. In most cases, he states, the rash was observed either on the third day or a day before the crisis. Sometimes the rash assumed a uniform erythematous appearance, which gradually faded into isolated spots. In two cases it was exactly like measles, but differed in distribution, the neighbourhood of the joints being more affected. In some the rash was wholly on the trunk, in others on the arms and legs, and in others general. Some had subsequent desquamation. Scheby-Buch[1] states that he met with simple erythematous rashes in the initial stages of tonsillitis, typhoid fever, and measles, presenting the same distribution, and differing from those of smallpox in intensity and extent. I have seen on several occasions, in cases of tonsillitis, a rash which I was not able to distinguish from the light-coloured erythematous initial rash of smallpox. In the *British and Foreign Medical Review,* 1851, p. 35, there is a description of an epidemic of fever in Silesia which showed those rashes. They generally appeared on the second day, according to "Dümler;" or on the third, "Trustius;" or from the third to the sixth, "Barensprung." It commenced on the flanks, and then spread to the body and limbs. It was spotted with darker centres than borders, rosy or pale red, not dark, and effaceable by pressure. Its duration was two or three days. It was followed by desquamation. The points that should be considered in the diagnosis of an initial rash are:—

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[1] *Ziemssen's Encyclop.*, vol. ii. p. 204.

[2] Murchison's *Continued Fevers*, p. 135.

[3] Liebert, *Ziem. Encyclop.*, vol. ii. pp. 316 and 327.

[4] *Med. Times*, 1850, No. 22.

[5] *Continued Fevers*, p. 515.

[6] *Deutsche Archiv für Klin. Med.*, 1866.

[7] *Studien ueber Febris Recurrens nach Beobachtungen der Epidemic in Jahre in* 1868, *Zie Breslau.*

Firstly, The age of the patient. Persons under 10 are only on rare occasions, if ever, affected with these rashes. There is no case, as far as I know, on record of an initial rash in a person under that age, except case 52. The rarity of its occurrence under that age will exclude a large number of cases of scarlet fever, measles, and other rashes frequently met with in children.

Secondly, Vaccination. Initial rashes are proportionately more common in vaccinated than in unvaccinated persons.

Thirdly, The site and appearance of the rash. This I have previously described. I do not believe there should be any difficulty in distinguishing between the petechial rash of smallpox and the rash of scarlet fever or measles. Its purple-brown-red colour, the spots which compose it, the site which it occupies, the well-defined, regular, oblique border which it almost invariably possesses below Poupart's ligament, should distinguish it from these rashes even when the scarlet fever rash possesses the unusual character which Thomas describes.[2] The petechio-erythematous rash selects the same site above and below Poupart's ligament, and ends in a similar border inferiorly, although not so well defined. The superior border is not so characteristic as that of the petechial rash, but even the upper border is generally such as has not been described in any other rash. This was particularly well marked in cases 2 and 7, and less marked in others. The darker colour of the rash about the groins, the sides of the chest, the axillæ, and inner surface of the upper arms, is also characteristic of this rash. In some cases the forearms and legs below the knees are covered with a bright scarlet rash. On these parts it is generally uniform for some inches above the wrists and ankles. It is only in exceptional cases of scarlet fever that one might fall into an error. Looking upon the appearance of the pure erythematous rashes only, in some cases it might be impossible to distinguish between them and some cases of scarlet fever and measles. It was this rash that Marson referred to, as I have already stated, as being like the rash of scarlet fever, but to be distinguished from it by its lighter colour.

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[1] Osler's *Notes on S. P.*, p. 12.

[2] *Ziem. Encyclop.*, vol. ii. pp. 204, 207.

Fourthly, Circumstances to be taken into account in the diagnosis of other acute diseases, such as (*a*) the nature of the accompanying symptoms; (*b*) previous attack of the suspected disease; (*c*) the existence at the time of an epidemic of any disease. These I need not enlarge upon.

The diagnosis of the initial rashes of smallpox from the initial rashes of other diseases is not difficult in the case of the petechial and the petechio-erythematous rashes, but I am not able to state the difference between the erythematous rash which precedes smallpox and the scarlet rash stated by Sir William Jenner, Murchison, and others to precede typhoid fever. From the description given by Drs Claud Muirhead and Tennent of the initial rashes of relapsing fever, I do not think that there is much danger of confounding them with those of smallpox if circumstances are well weighed.

Prognostic Value.—Authors vary in their opinion regarding the kind of smallpox that is likely to follow an initial rash. Watson,[1] Flint,[2] and Lieving[3] consider an initial rash an unfavourable symptom likely to be followed by a confluent attack. Niemeyer,[4] Osler,[5] and Scheby-Buch consider them as favourable symptoms. Knecht thinks that they are favourable below, but serious above thirty years of age. Bristowe[6] and Curschman[7] think the erythematous (Curschman) or scarlatiniform (Bristowe) more common in modified smallpox, and the petechial as preceding cases which threaten to be severe. Hebra[8] states that cases having this rash on the abdomen more often terminate badly than in recovery, and particularly when the affection passes beyond mere hyperæmia and becomes hæmorrhagic. Trousseau[1] believed that the hæmorrhagic scarlatiniform (probably petechio-erythematous) is an alarming symptom in natural smallpox, but not unfavourable in the modified variety. Sharkey[2] states that the more dusky or purple the tint of an initial general erythema, the more unfavourable is the case likely to be. Simon[3] considered the initial rashes of no prognostic value.

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[1] Watson, *Pract. of Physic,* 4th ed., p. 858.
[2] Flint's *Pract. of Med.*, 3rd ed., p. 893.
[3] Lieving's *Hdbk. of Diag.*, 1878, p. 39.
[4] Niemeyer's *Text-Book,* vol. ii. p. 554.
[5] Osler's *Clin. Notes,* p. 13.
[6] Bristowe, *Pract. of Med.*, 1876, p. 165.
[7] *Ziem. Encyclop.*, vol. ii. p. 374.
[8] "Skin Dis.," *S. S. Trans.*, vol. i. p. 56.

Of my 58 cases 31 were petechial, 12 had petechiæ on an erythematous base, and 15 were erythematous.

Of the 31 petechial, 10 (32·2 per cent.) had discrete variola; they were all vaccinated, and they all recovered except one: 13 (41·9 per cent.) had semi-confluent variola; 10 of these were vaccinated and 3 unvaccinated; they all recovered: 7 had confluent variola, and one had hæmorrhagic (25·8 per cent.); 4 of the confluent were vaccinated and 3 not vaccinated; 4 of them died, 3 vaccinated and 1 not vaccinated. The hæmorragic case was vaccinated, and proved fatal.

Of the 12 petechio-erythematous cases, 4 (33·3 per cent.) had discrete variola, were vaccinated, and recovered; 2 (16·6 per cent.) had semi-confluent variola, were vaccinated, and recovered; 4 had confluent and 2 hæmorrhagic variola (50 per cent.) The 4 confluent cases were all vaccinated, and they all died. The 2 hæmorrhagic cases also died; 1 of them was vaccinated and the other not.

Of the 15 erythematous cases, 14 (93·3 per cent.) had discrete, and 1 (6·6 per cent.) had confluent variola. They were all vaccinated, and they all recovered.

Thus in the petechial rashes 19·3 per cent. proved fatal; in the petechio-erythematous, 50 per cent.; and in the pure erythematous, none. Of the confluent smallpox following the petechial rash more than the half died. Of the confluent following the petechio-erythematous all died. The single confluent case that followed the erythematous rash recovered.

During the year 1880, 813 cases of smallpox were treated at the Homerton Smallpox Hospital. Of these 573 (70·4 per cent.) were discrete, of whom 4 died (0·8 per cent.); 127 (15·6 per cent.) were semi-confluent, of whom 27 died (16·1 per cent.); 93 (11·4 per cent.) were confluent, of whom 70 died (75·2 per cent.); 20 (2·4 per cent.) were hæmorrhagic, of whom 20 died (100 per cent.)

The percentage of discrete cases following the petechial rash was 32·2. Of all the cases admitted, 70·4 per cent. were discrete. Discrete cases were, therefore, about half as frequent in cases affected by the petechial rash as in all the cases admitted. The percentage of semi-confluent cases after the petechial rash was 41·9, while of all the cases admitted 15·6 per cent. were semi-confluent, so that semi-confluent smallpox was more than twice as frequent in cases affected with the petechial rash. The percentage of petechial rash having confluent or hæmorrhagic smallpox was 25·8, while of all the cases admitted only 13·7 were confluent or hæmorrhagic, so that confluent and hæmorrhagic smallpox was about twice as frequent after the petechial rash. It might be shown, in the same manner, that discrete cases are about half as frequent after the petechio-erythematous rash as they are in general cases, and that confluent and hæmorrhagic smallpox are about three times more frequent than they are in general cases. In the erythematous rash the percentage of slight cases is considerably higher, and of severe cases considerably lower, than in general cases of smallpox. The death-rate in the petechial rash is a little above the general death-rate, while in the petechio-erythematous it is about three times higher, and in the pure erythematous much lower than the general rate. The death-rate of the confluent cases which followed the petechial rash is lower than the general confluent death-rate, but that of the confluent cases which followed petechio-erythematous is much above the general confluent death-rate. The conclusion, therefore, that may be fairly drawn is that—

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[1] "Clin. Lect.," *S. S. Trans.*, vol. ii. p. 81, 1869.
[2] *St Thos. Hosp. Rep.*, vol. x., 1880.
[3] *Archiv für Dermat. und Syph.*

1st, If a case has a pure erythematous initial rash, it is more likely to have a slight attack and to recover than a case of any other initial rash or a case without any rash at all.

2nd, If the rash is petechial, the case is about twice as likely to have a confluent or semi-confluent attack, but the ultimate result is likely to be about as favourable as in general cases.

3rd, If the rash is petechio-erythematous, the case is about three times more likely to be severe than in general cases, and the termination is more likely to be unfavourable. I have also the impression that, in cases having this rash, the darker the redness, and the more persistent it is on pressure, the more likely is the case to be severe, but that if a petechial (pure) rash is on one part of the body, such as the abdomen, and a pure erythematous rash on another, such as the arms, the prognosis is more favourable.

Regarding the petechial rashes, I am under the impression that the nearer the petechial spots go to the characters of true petechiæ, the more severe is the case likely to be. In the erythematous rashes, the lighter the redness, the easier it disappears on pressure, and the shorter the duration, the milder the case. In forming an opinion, other circumstances besides the characters of the initial rash must be considered and weighed. As Sydenham says, we should not go by external appearances only.

VI.—A CLINICAL ACCOUNT OF SMALLPOX.

By James Niven, M.B., M.A. Cantab., Fellow of Queen's College, Cambridge.

(*Continued from page* 521.)

Confluent cases differ widely in their severity. If only a few canals are formed on the face by confluent pocks, the case is called semi-confluent, and death rarely occurs. Sometimes, again, the eruption is confluent only on the face, which may be covered with a continuous sheet of confluent pocks, while elsewhere the eruption is nearly everywhere discrete, or the eruption may be confluent only on the face and wrists, or on the face, wrists, and hands; and between this and the severest form, in which the whole body is completely enveloped in a sheet of continuous pocks, there are all degrees of severity. In confluent cases, where there are no hæmorrhages or complications, the danger to life is proportionate to the amount of eruption, and patients may die in the third or fourth week from dermatitis alone; but this is exceedingly rare. I have seen cases where the body was completely covered with the eruption, and where many parts were left quite raw when the cuticle was thrown off, where the patient rapidly picked up.

The most serious part of this form of the disease is the presence in many cases of abundant eruption about the larynx. The eruption about the pharynx makes swallowing very difficult, and retards recovery by preventing the patient taking nourishment, especially stimulants; but this is of minor consequence. Very often from the fourth to the fourteenth day of the eruption, especially about the eighth to the tenth day, the eruption about the larynx causes œdema glottidis. *Debris* of scabs accumulates about the cords, and death rapidly ensues. This is the most frequent cause of death in confluent cases. It is more common in young than in old people, but is always a danger.

Delirium in the severer cases is common, but generally is not violent. The mind wanders, especially at night; and it is an important fact, that a patient may be irresponsible for his actions at night, and become quite conscious in the morning, remaining so through the day. Delirium commences in the vesicular stage, and remains through the earlier part of the pustular stage. In a good few, say 10 per cent., of delirious cases, the delirium is of an active and sometimes of a violent character, and then often takes a special and curious form. The patient demands his or her clothes, and asserts that they have been removed and hidden away. Men particularly insist on getting their trousers. Then the patient suddenly flings off the bedclothes and bolts out of bed. If by any means he escapes the attendant, he rushes down the ward or makes for the window. This, of course, rarely occurs. He will overturn whoever comes in his way, but is not aggressively violent. Such is the special form the delirium of smallpox often takes. In people addicted to drinking, it is mixed up with and obscured by alcoholic delirium. Like alcoholic delirium, that of smallpox can often, though not always, be momentarily stopped by a sharp question. The patient answers the question intelligently, and directly lapses.

All confluent cases sleep with difficulty, and require composing draughts, which in the worst cases are frequently unavailing; nor is alcohol here of the same utility which it exhibits in other conditions, though in one or two cases it induced sleep when everything else had failed. There is almost invariably constipation.

Where the eruption is fully vesicular, and more particularly after it is pustular, the irritation of the face is sometimes intolerable, and there is intense pain in the hands and feet. The patient claws his face if left free, and becomes covered with dried blood and scab. This is relieved and prevented by cold-water dressing over the face. The hands and feet are relieved by poulticing. If the eruption is very confluent, you find that the restoration of the skin and the progress of the case is promoted by wrapping the limbs in wet lint. Oil should be avoided.

In discrete smallpox there is not much emaciation, but in severe confluent cases emaciation is often considerable, though, as a rule, with careful treatment the patient rapidly picks up. Occasionally the hair is lost, but generally grows again luxuriantly. A common source of trouble is the persistent formation of pus on and by the sides of the nose, after the general scabbing is over. You poultice assiduously and it stops. Intermit, and in a day or so small scabs have formed with pus beneath them, which oozes here and there. Water dressing, dilute carbolic lotion, solution of pot. bicarb. is then tried, with various success, but frequently the process eludes all efforts to check it, and goes on for a considerable time.

In severe cases of confluent smallpox, especially about the commencement and during the earlier part of the pustular stage, a remarkable and unique phenomenon occurs in the violent pulsation of the carotids. The pulse can be counted a long way off while watching this. The pulse at the wrist is at this time full and soft, and about 120 per minute.

Many of these patients smell horribly, more especially if the confluent attack is at the same hæmorrhagic. Fortunately the smell does not extend far from the patient. Sometimes the fœtor oris is very disgusting. This is a very bad sign, and, on the other hand, if the breath is sweet the patient is in a fair way to recovery. To keep down the smell we used carbolic ointment, sanitas ointment, and terebinth. The carbolic seemed to remove the offensiveness somewhat. The others, pleasant in themselves, seemed in the worst cases to combine into a smell more offensive than before.

Variola confluens is modified by vaccination in the direction of the period being shortened, and sometimes what threatens to be a severe confluent attack aborts and runs a very short course.

3. *Variola Hæmorrhagica Pustulosa.*—In this form the ordinary eruption of smallpox is present, but, besides, there is hæmorrhage either beneath the pocks, or beneath the pocks and also into the skin beside the pocks. The hæmorrhage occurs in the tissue beneath the centre of the pock, and is to be distinguished from hæmorrhage into the pock, which has no special significance. It is generally stated that these cases nearly all die, and it is therefore necessary to understand what is meant by the term *hæmorrhagica pustulosa.* If we include in this designation cases in which there is hæmorrhage beneath a limited number of pocks, then many recover. It is not uncommon for even confluent cases, with a dozen or more pocks under which hæmorrhage has occurred, to recover. In these cases hæmorrhage beneath the pocks occurs about, say, the third day of the eruption, and the subhæmorrhagic pocks do not increase in number. In one discrete case there were hæmorrhages beneath nearly every pock, and yet the patient made a good recovery. In another case there were hæmorrhages beneath the pocks, as well as one or two pretty large subcutaneous hæmorrhages, yet the patient, though much emaciated, made a good recovery. Both patients had vaccination marks.

Nevertheless, by far the larger number of cases with hæmorrhage die, and those cases of variola confluens which die, especially where there is fœtor oris well marked, generally have some subhæmorrhagic pocks. The hæmorrhages appear at various periods.

In some cases, and these are amongst the worst, the hæmorrhages appear almost simultaneously with the eruption. The eruption itself is imperfect, being irregular in form and size, and of a bluish tinge, and the whole body may have a leaden hue. These cases die rapidly. They are often actively delirious.

Another form presents itself in those cases where at first there is almost no eruption, but many ink-daubs on the body, about the size of a split pea. The patient is very prostrate; there are black sordes about the teeth and lips. The face is expressionless, somewhat puffed or of normal size. The pulse is weak and of ordinary rapidity, perhaps a little accelerated. The mind is clear. The eruption appears in a day or two after the ink-daubs; the mind wanders, and the patient soon dies—say, on the third day after the appearance of the eruption. These cases form a connecting link with *variola hæmorrhagica vera.* In these cases the temperature, though raised, is never very high.

In another group of cases the eruption seems to be taking the normal course of a confluent attack, when, on the second, third, fourth, to sixth days of the eruption, a few pocks become subhæmorrhagic. Next day a large number have hæmorrhages beneath them, the number increasing rapidly up to death. The majority of these cases are delirious before the hæmorrhage occurs or during it. In one case, however, copious hæmorrhage was succeeded by disappearance of delirium. The temperature in this group runs the course of the temperature in a confluent case of variola, falling with the occurrence of copious hæmorrhage. There is frequently hæmorrhage beneath the conjunctiva, and occasionally some subcutaneous hæmorrhage. Death occurs generally about the tenth to eleventh day from the appearance of the eruption, though sometimes it is considerably delayed, and some appear about to get over it, but inflammation of the lungs sets in and they die.

4. *Variola Hæmorrhagica Vera.*—There are ink-daubs on the body; there is great prostration; very feeble pulse; a low temperature; no smallpox eruption. The face is not emaciated, and may be puffed. The mind is clear, and the patient dies on the third or fourth day. There are generally hæmorrhages under the conjunctiva.

Let us now consider the complications which retard recovery or hasten death.

1. *The Skin and Mucous Membranes.*—The most frequent complication of smallpox is boils. They occur, after the eruption has dried up, on all parts of the body—scalp, eyelids, nose, face, over the shoulder-blades, on the buttocks, thighs, legs, hands, and feet. They are most usual and abundant after confluent cases. They sometimes occur gradually, and are then not more than two or three in number. Not unfrequently they come on rapidly, as in pyæmia, and fresh crops appear from day to day. Generally they are small, but sometimes enormous. They are opened and poulticed, then water-dressing applied. Wine given freely seems to exercise a healing influence on those present, and seems to check the onset of new ones. Quinine and iron is also, perhaps, useful. They retard convalescence, it may be, two or three months. In one case sent in convalescing from smallpox, the numerous boils present caused the illness to last in all five months.

Bed-sores occur over the sacrum in severe cases, and sometimes result in deep sloughs which take a long time to clear off and heal up.

Occasionally after severe attacks the skin remains in an irritable state, and breaks out in one part as fast as it heals in another. In one such case convalescence was retarded for seven months.

Occasionally the skin, especially on the face, develops a form of keloid formation, bridges of scar tissue interlacing each other. In one remarkable case of this kind the patient became gradually so disfigured that he could get no employment afterwards. But the same thing occurs in a good few cases, though in a lesser degree. Collodion painted over the part keeps the process in check to some extent. Sometimes the nails are shed.

A frequent source of annoyance is the sores that succeed the casting off of the scabs. They readily heal with water-dressing. But these either heal or do not occur, the skin is unbroken, and the patient is transferred to a convalescent ward, and a few days after one discovers that sores have appeared, aggravated by being concealed as long as possible. He is put to bed and some dressing applied, probably water-dressing. The most obstinate of these sores occur on the face and near the heel. In one case extensive scab-sores covered the backs of both elbows and parts of the upper and lower arms. These readily healed when put in splints. Generally speaking, rest is the essential and most efficient remedy for these cutaneous affections.

Organs of Special Sense.—The Nose.—Occasionally catarrh with plugging of the nostrils occurs in confluent cases. It is very rare, and is relieved by syringing.

The Eyes.—Along with boils, affections of the eyes are among the most common complications of smallpox. In the severer cases, towards the end of the vesicular and during the earlier part of the pustular stage, conjunctivitis to some extent is almost invariable. Sometimes it is very severe. Along with the concomitant œdema of the lids, it is relieved by the application of cold-water compress. The change thus effected in a short time is surprising, both as regards appearance and relief of suffering. Occasionally, but very rarely, the conjunctivitis becomes purulent. During convalescence the cornea is very liable to be assailed, and this is a remarkable feature of smallpox. Often it is affected after conjunctivitis, but also in many cases where there has been no conjunctivitis. You observe that the conjunctiva has become congested, and on looking nearer you see a white patch or shallow ulcer on some part of the cornea, or most frequently a lunulated patch round the border of the cornea has become pale, to which part the vessels cluster more particularly. This complication occurs oftener in confluent than in discrete cases, but in the latter it is not rare. With the most careful treatment these affections generally last a considerable time—at shortest a week or two, at longest two or three months. In some cases, and these almost always severe, the keratitis spreads in a few days over the cornea, and the eye is lost. The pain is now very severe, and is greatly relieved by operation, which also affords a better chance of part of the cornea again clearing. When this is about to happen, a rail of vessels runs across to the clearance patch, and supplies nutrition on the spot for the necessary reparative change.

We operated with a keratome on about half a dozen cases. In two of these, operated on by Dr M'Combie, sight was partially restored. In one case of mine there was a slight improvement. In all relief was afforded by the operation. These were all the cases of complete invasion of the cornea I have seen in patients who recovered, and, considering the number of cases treated, they are remarkably few.

Sometimes pus collects in the aqueous chamber behind the cornea, which requires letting out. In certain cases, especially in cases of hæmorrhagica pustulosa and very severe confluent cases, the cornea goes completely in twenty-four hours.

Iritis is exceedingly rare. I have seen only one case clearly traceable to smallpox. It recovered rapidly under treatment. Phlyctenules, with irritation and congestion of the conjunctiva, are not uncommon. Well-formed variolous pocks occur on the conjunctiva, though rarely. Lachrymal abscess I have seen once.

Ears. — As in scarlet fever, otitis occurs. I am inclined to believe that it occurs almost always in cases with very abundant eruption which has invaded the meatus. During the casting off of the scabs discharge comes from the ear. I have seen one case in which it seemed clearly traceable to this cause. It has to be remembered that the throat is often badly attacked in severe cases. The otitis of smallpox yields readily to treatment.

(*To be continued.*)

VII.—REPORT OF MEDICAL WORK AT THE COWGATE DISPENSARY FROM 1st NOVEMBER 1882 TO 1st AUGUST 1883.

By Ernest F. Neve, M.B., M.R.C.S., Resident Physician.

The district covered by the work of this Dispensary extends from West Grassmarket to the Pleasance, and is bounded respectively on the south and north by Chambers Street and the High Street, a large part of the latter being included.

New patients, 7714; of these, about 1600 children. Total number of visits, etc., 16,769.

I. Patients seen at the Dispensary—

(*a.*) At mid-day consultation, 3069.

Space permits only of a statement of diseases as allotted to their respective systems, viz.:—

General diseases,	385	Diseases of cellular tissue,	260
Alimentary system,	535	Integumentary system,	255
Respiratory „	953	Reproductive „	62
Circulatory „	96	Venereal diseases,	82
Nervous „	164	Eye „	81
Injuries,	137	Ear „	42
Urinary system,	17		

(*b.*) Diseases of women. Consultation twice a week. New cases, 98. Of these, chronic cellulitis, peritonitis, and retroversion of uterus were most frequent.

(*c.*) At evening consultation—new cases, 400. The majority of these were minor ailments in patients still able to work, *e.g.*, bronchitis, rheumatism, dyspepsia.

(*d.*) Minor surgery, etc. New cases dressed, 473.

Operations.

Teeth extracted,	450
For sebaceous cyst of forehead,	1
For necrosis of toe,	1
For fissure of anus,	1
For internal strabismus,	2
Tatooing cornea,	1
Tapping anterior chamber of eye,	1
Tracheotomy,	3
Hydroceles tapped,	3

Fractures.—Of clavicle, 6; ribs, about 20; other bones, 9.

Dislocations.—At shoulder, 3; other joints, 2. The most frequent cases for dressing were ulcers of all kinds and degrees, also injured heads and extremities. A large number of whitlows and abscesses were opened—in the latter, where possible, strict Listerism was adopted.

(*e.*) Vaccinations.—Number, 223. One case of inflammatory ulcer connected with the pocks, and one of erysipelatous inflammation of the arm, occurred. Both proved amenable to treatment.

II. Patients visited at their own homes—

(*a.*) Medical and surgical cases, 2751. These comprised nearly all the more serious cases, both of acute and chronic far advanced organic disease.

The table of mortality is of interest, showing the most prevalent and fatal diseases. Total mortality, 163.

General Diseases.	
Debility,	6
Marasmus,	5
Tuberculosis,	2
Typhoid,	2
Measles,	2
Scarlet fever,	1
Congenital syphilis,	1
Acute rheumatism,	1
Alimentary System.	
Gastric cancer,	2
Infantile diarrhœa,	4
Gastritis,	1
Cancer of liver,	1
Abscess „	1
Cancer of intestine,	1
Tabes mesenterica,	1
Respiratory System.	
Bronchitis,	40
Phthisis,	22
Croupous pneumonia,	9
Catarrhal „	13
Croup,	4
Chronic interstitial pneumonia,	2
Laryngitis,	1
Circulatory System.	
Cardiac valvular disease,	7
Congenital cardiac disease,	1
Aneurism,	2
Nervous System.	
Tubercular meningitis,	9
Convulsions,	3
Meningitis,	2
Shock,	1
Hydrocephaloid disease,	1
Cerebro-spinal sclerosis,	1
Progressive muscular atrophy,	1
Reproductive System.	
Puerperal septicæmia,	2
Urinary System.	
Chronic Bright's disease,	2
Other Causes.	
Fracture of skull,	2
Hip-joint disease,	1
Premature birth,	2
Still-born,	4

The deaths from bronchitis occurred chiefly either in old people or from capillary bronchitis in children. In the case of the latter disease, catarrhal pneumonia often supervened. Croupous pneumonia, where fatal, in almost every case affected both lungs. Tracheotomy was performed in three of the cases of croup. In the first the mother refused to allow the operation till the child was moribund. Artificial respiration was carried on for half an hour without effect. In the second the child survived three days, but died of bronchitis. In the third the child was suffering also from catarrhal pneumonia; he improved after the operation, but on the evening of the second day unfortunately died in his mother's arms, under circumstances which point to her having lost her presence of mind and omitted to attend to the tubes. One of the cases of aneurism was found post-mortem to be a large dissecting lesion of the ascending aorta. The case of scarlet fever presented no rash, but severe throat affection and rapid collapse. Of the two cases of simple meningitis, one occurred in a child, the other in an old woman—autopsy in both cases proving the diagnosis.

Infectious Diseases.—Number, 75. Typhoid 16, typhus 2, scarlet fever 23, measles 33, varioloid 1. Many of these were sent to the Fever Hospital. Typhoid appears to be endemic in the district. There was an outbreak of scarlet fever in November, but isolated cases have also occurred from time to time. A distinct epidemic of measles prevailed in some parts of the district during May, and cases have been frequent throughout the summer.

(*b.*) *Midwifery Practice.*—Number of cases, 230. Abortions about 20; persistent R.O.P. presentations, 2; right shoulder presentation, 1; pelvic presentations, 3; head and elbow presentation, 1; placenta prævia (partial), 1; twins, 1. There were also a considerable number of minor complications.

Forceps applications: low operations, 7—viz., for funnel-shaped pelvis, 2; justo-minor, 1; inertia uteri, 1; persistent R.O.P., 1; after-coming head in a breech case, 1; abnormally large head, 1 (child still-born): high operation, 1—for flat pelvis. Versions 2; bipolar, 1,—for partial placenta prævia (child still-born); internal, 1,—for shoulder presentation (child dead some days). Separation of adherent placenta, 6.

Two cases alone proved fatal to the mother, both from puerperal septicæmia. In the first the patient (placenta prævia) had been apparently suffering from cellulitis; on the ninth and tenth days, however, the temperature mounted by strides from 98°·6 to 108° F., death being preceded during twelve hours by unconsciousness and clonic spasms. In the second, the labour was quite normal. The next day the temperature rose, and after great variations in it, and heavy sweatings of a pyæmic type, in spite of energetic antiseptic treatment, the patient died on the ninth day after delivery. There was a case of erysipelas in the house below, but the accoucheur had not been there, neither were other means of communication to be traced.

Medical Mission Dispensary, Canongate (established 1882). New patients, 600 ; of these, 226 children.

General diseases,	110	Female reproductive system,	21
Nervous system,	37	Hæmopoietic system,	14
Alimentary system,	150	Circulatory system,	15
Respiratory system,	175	Eye diseases,	6
Cellular tissue,	22	Integumentary system,	30
Urinary system,	1	Ear diseases,	6
Locomotory system,	3		

VIII.—ON THE EARLY PUBLICATIONS OF THE MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

By William Craig, M.D., F.R.S.C. Ed., etc., Lecturer on Materia Medica, Edinburgh School of Medicine.

(*Read before the Medico-Chirurgical Society of Edinburgh, 5th December* 1883.)

In 1882 the Medico-Chirurgical Society of Edinburgh entered on a new era by the publication of an *annual* volume of Transactions, and the *presentation* of the same to every Ordinary Member of the Society. In the volume for that year no notice was taken of the fact that the Society had at an early period of its history published several volumes of Transactions. The object of this paper is to supply that defect, and to give the members some idea of the early publications of this Society.

The Society was founded 2nd August 1821, and the first volume of Transactions was published in 1824. It contains only original communications, and evidently includes most of the papers read during the first two sessions of the Society. It is a volume of 725 pages, and was published at 18s., the publisher being Mr Adam Black of this city. Of this volume 750 copies were printed. A second volume of Transactions was published by Mr Black in 1826. It contains the papers read during the third and fourth sessions of the Society. It contains 435 pages. Of this volume 500 copies were printed. A third and last volume of Transactions was published in 1829, and evidently includes the papers read during the fifth and sixth sessions of the Society. It consists of 676 pages, and was also published by Mr Black. Of this volume only 300 copies were printed. The published price of the three volumes was £2, 16s.

I have not been able to ascertain the precise terms on which these early publications of the Society were offered to the members; but it is very evident, from the gradual diminution of the numbers printed, that financially their publication was not a success, and had to be abandoned. This is very much to be regretted, for the first three volumes contain very valuable communications; and had the Society been able to continue the publication of the papers read before it in a collected form, it would have conferred more benefit upon its members and the profession generally.

In the able *résumé* of the work of this Society by a former President, the late Dr P. D. Handyside, in his *Jubilee Chronicon*, reference is made to many of the papers contained in these volumes; but it appears to me that it might be both interesting and profitable to the members to know more of the very able communications which were presented to this Society during the early years of its existence, many of these papers written by men whose names will be had in everlasting remembrance. I shall endeavour to give you a brief *résumé* of these early publications.

There are in these three volumes 89 original communications, of which fully the half treat of medical subjects, and 17 of surgical subjects. The other papers relate to physiology, pathology, poisons, comparative anatomy, and malformations.

Amongst the medical papers, 13 treat of general diseases. Amongst these, scrofulous and tubercular diseases have a prominent place. Six of the papers are devoted to these affections. Two of these papers are by Professor Alison,—one entitled "Observations on the Pathology of Scrofulous Diseases, with a View to their Prevention," with beautifully coloured illustrations; and the other, "Additional Cases and Observations illustrating the Origin of Tubercles." These are very able papers, and the author endeavours to establish the following conclusions:—"(1.) That the general prevalence of the scrofulous diathesis is to be ascribed rather to the modes of life which an advanced and artificial state of society implies than to the circumstance of climate; and (2.) That scrofulous tubercles may be, and often are, deposited in consequence of inflammatory action." Another is by Dr John Abercrombie, "On the Nature and Origin of Tubercular Diseases," in which he expresses the opinion that "deposition of albumen is the origin of tubercular disease." Another paper is by Dr William Moncreiff, entitled "Case of Tubercular Disease of the Peritoneum and Omentum." Two papers are by Mr William Wood, entitled "Observations on Painful Subcutaneous Tubercle." Mr John Howship, London, a corresponding member of the Society, has an interesting and instructive paper, illustrated by an excellent drawing, entitled "Case of Mollities Ossium, with the Appearances on Dissection." There is also an excellent paper on Melanosis by Mr William Cullen and Mr Robert Carswell, in which the authors maintain that melanosis and cancer are "diseases quite of a different nature." There is an interesting paper, entitled "History of a Case of Anæmia," by Dr J. S. Combe, who has so lately passed from amongst us, full of years and of honour. Two papers treat of "Purpura Hæmorrhagica,"—one by Dr Ebenezer Gairdner, and the other by Dr P. Fairbairn. Mr William Hamilton, surgeon, H.E.I.C.S., communicated a very exhaustive and interesting paper on that remarkable disease known as Beriberi, for which he strongly recommends bloodletting. Dr Alexander Macaulay contributed an interesting paper entitled "Cases of Persons Struck by Lightning." In these cases bloodletting was the favourite remedy. Eight papers treat of diseases of the heart and bloodvessels. The first paper in Vol. I., and which appears to have been the first paper communicated to the Society, was by Dr John Abercrombie, read 5th December 1821, entitled "Contributions to the Pathology of the Heart." This is a learned and able paper, in which the author treats the subject thus:—(1.) Inflammatory Affections; (2.) Organic Affections; (3.) Rupture; and (4.) Displacement of the Heart. Another paper will be read with much interest, entitled "Case of Carditis attended by unusual Symptoms; with an Account of the Appearances on Dissection, Death having occurred from another Cause after the Cure of the Original Disease," by Dr John Gairdner. Mr J. H. Wishart, Surgeon to the King in Scotland, records two cases of heart disease, in both of which he made post-mortem examinations. In one he found that "the right ventricle was occupied by a polypous concretion extending into the auricle, which it filled so completely as must have been a great impediment to the circulation from the veins into the auricle and from the auricle into the ventricle." In the other case "the valves were in a thickened, cartilaginous state." Both of these preparations were deposited in the museum of the Royal College of Surgeons. Two papers treat of aneurism of the aorta, one by Dr Thomas Molison, complicated with disease of the spinal cord, which he attributes to the aneurism. The other paper is by Dr Archibald Inglis. In his case the aneurism ruptured into the œsophagus. This case is well recorded, and the paper is interesting as being one of two in these three volumes of Transactions whose author is still alive. Two papers on the "Sudden Spontaneous Obstruction of the Canals of the Larger Arteries, with some Observations on the Processes employed by Nature to prevent or arrest Hæmorrhage from lacerated arteries," by John W. Turner, Professor of Surgery to the Royal College of Surgeons, are communications of very great value. Professor Andrew Duncan, jun., communicated an interesting paper on a "Case of Inflammation of the Cephalic Vein, which terminated Fatally; with the Appearances on Dissection."

Of diseases involving the œsophagus, trachea, and lungs, we have four papers. Dr William Cumin, Glasgow, communicated a paper entitled "Remarks on Stricture, with three Cases of Stricture of Œsophagus," in which he gives three causes of strictures:—(1.) inflammation; (2.) degeneration of the mucous lining or the walls of a tube into various morbid states, more especially carcinoma; and (3.) spasm. Dr David Hay communicated a "Case of Dysphagia, with Abscess involving the Œsophagus, Trachea, and Lungs." Dr James Pitcairn related an interesting case of "Empyema successfully treated by Paracentesis Thoracis;" and Dr Dumbreck communicated a paper entitled "Case of Emphysema without Local Injury." Five of the papers relate to affections of the abdominal viscera,—one on "Chronic Gastritis," by Mr William Brown, one of two of the original members of the Society who still survive. Dr James Molleson's paper, "Notes of some Remarkable Cases," will be read with much interest. One case illustrates stricture of the ileum, with artificial anus at the umbilicus; but, notwithstanding, there were frequent evacuations by the rectum. Dr John Gairdner communicated two valuable papers on an infantile disease in which erosions and perforations of the alimentary canal were found after death. Dr A. H. Renton has an interesting paper entitled "Observations on the Dysentery of Madeira," in which he says, "The great frequency of the disease, there can be little doubt, is attributable chiefly to a want of proper clothing. As regards treatment, he strongly recommends "mercury given boldly and perseveringly, until the mouth become decidedly affected."

Four of the papers treat of diseases of the nervous system. Mr J. P. Rhind, surgeon of cavalry, H.E.I.C.S., has a very interesting case of phrenitis with great cerebral congestion, which he successfully treated by opening the radial artery. This case of phrenitis occurred in his native assistant, who at midnight was taken suddenly and dangerously ill. Dr Rhind found him in a low, muttering delirium; his pulse quick, hard, and small; his eyes much dilated and inflamed. He goes on to say, "I immediately sent for my lancets; but his pulse sank so rapidily, that before I had time to open a vein of the arm it could not be felt at the wrist, and not one drop of blood would flow; nor were my attempts with the jugular more successful. I now, without the smallest loss of time, divided the temporal artery, in which a very feeble pulsation could still be felt. From it a very small stream flowed, and that there might be as sudden a depletion as possible, I also divided the corresponding artery of the opposite side; but even this was insufficient to arrest the rapid progress of the disease, and before four ounces could be abstracted it entirely ceased. His extremities became cold, and neither was his breathing nor the pulsation of his heart perceivable. He was to all appearance dead; so much so, that the attendants had already begun to close his eyes and stretch his limbs, when, happening to observe a case of scalpels upon the table, the thought suddenly struck me that, as one last and only hope, I would try the effect of opening the radial artery. I immediately snatched up one of the scalpels, cut down upon the artery, and, upon its being laid fairly bare, made a small puncture in it with the point of a lancet. A few drops only of blood oozed from the wound; presently, however, in small uninterrupted stream, as from a vein, and nearly of as dark a colour; the stream gradually enlarged, till at length, the arteries recovering their natural impetus, the blood was propelled per saltum, and the same instant the poor fellow opened those eyes which every one present supposed had been closed for ever. He recovered."

Another of the papers relates an interesting case of chronic hydrocephalus, by Mr Charles Miller. The patient died at the age of 16½ years. The disease was first noticed when the child was 11 months old. On examination after death, the "convolutions of the brain were floating like loose intestine, and defied dissection; when touched they went nearly into a gelatinous mass. There was a quantity of water within the cranium measuring 8½ pints; and yet it is stated that "his memory was particularly correct; indeed, his mental faculties were completely unimpaired." There is a curious paper by Dr John Storer, Nottingham, communicated by Dr Abercrombie, in which the author gives "some account of a cerebral affection arising during the course of pulmonary consumption, and arresting the further progress of that disease." The cerebral affection referred to consisted generally of abscesses or ulcers. A paper of great interest, both historically and otherwise, by Mr William Wood, entitled "Observations on Neuroma, with Cases and Histories of the Disease," occupies a prominent place in Vol. III.

Four of the papers treat of fevers. Dr Robert Hamilton, surgeon to the Magdalene Asylum, communicated a very interesting paper on a fever which occurred in that asylum in April 1821. The paper illustrates very forcibly the influence of panic in propagating infectious diseases. The disease spread with alarming rapidity among the inmates, until Dr Hamilton effectively stopped the progress of the disease by telling them that such rapid spread of the disease was never heard of, and insisted that the fumigation had fortified them against the most virulent contagion. In Vol. II. there is an excellent account of the yellow fever which appeared in the Queen's Regiment in Barbadoes in 1816 and 1817, by Dr Alexander J. Ralph, assistant surgeon to the regiment. Dr W. H. Ruan communicated an interesting account of a very peculiar contagious epidemic disease, a disease which was *sui generis*, but evidently a fever, accompanied with an exanthematous eruption, which made its appearance in the island of St Croix in October 1827, having been imported from the neighbouring island of St Thomas. Mr Walsh, assistant surgeon of the 89th Regiment, communicated an account of the fevers and other diseases which attacked the British troops during the Burman war, a paper interesting and instructive. Two papers treat of epidemics of erysipelas—the one by Dr John Stevenson of Arbroath, in which he seeks to prove the contagious nature of that disease, and the other by Dr W. Gibson of Montrose.

Two papers treat of syphilis—one by Sir George Ballingall, entitled "Remarks on the Cranium of a Man who died of Syphilis," and the other by Dr John Wilson, Hull, on the "Natural or Spontaneous Cure of Syphilis," for which he recommends "simple external applications, a rigid antiphlogistic regimen, including a complete state of rest."

Five of the papers are devoted to therapeutics. Two of these treat of the use of tobacco in tetanus. They are by Dr Thomas Anderson of Trinidad, who tried the tobacco treatment of this affection, and with marked success, both in the traumatic and in the idiopathic form of the disease. He used a strong decoction of the fresh leaves, with which he fomented the muscles contracted, and afterwards cataplasms of the leaves boiled till quite tender and applied over the parts. The warm bath, into which some of the decoction was thrown, was used every three hours, and a clyster of the same decoction was given twice every 24 hours. He preferred the native tobacco, which, he says, is milder than the Virginian variety. For the decoction he recommended four pounds of the dried plant to be boiled for an hour in eight gallons of water. There is a very able paper by Dr James Begbie on the "Sedative Powers of Datura Stramonium, with Cases." He used an extract from the seeds. The dose was one-fourth of a grain, repeated every third or fourth hour during the day, and in no instance increased beyond half a grain. Dr Begbie states that in no case was any bad effect produced. Dr William Young contributed a paper on the "Use of Ergot in Cases of Tedious Labour." He strongly recommended the drug in these cases, and also for checking hæmorrhages. The remaining paper is an interesting one by Dr John Davy, entitled "Observations on James's Powder and the Antimonial Powder of the London Pharmacopœia."

Three papers treat of poisons. The most important of these is an able and learned paper by Sir Robert Christison, entitled "An Account of several Cases of Poisoning with Arsenic, in illustration of the Delicacy of the Chemical Evidence and Weight of the Evidence drawn from Symptoms." Dr A. H. Renton of Madeira contributed a valuable paper on the "Poisonous Effects produced by swallowing the Seeds of Datura arborea," a plant very abundant in many parts of the island. The symptoms observed were those usually seen in poisoning with the atropeæ, flushed countenance, dilated pupils, and wild, wandering expression. The other paper is on the "Deleterious Effects of the Smoke of Coal," by Dr John Gairdner, a paper of much interest, in which he relates the cases of six individuals subjected to its influence, all of whom recovered.

Only one paper treats of obstetric medicine. It is by Dr William Young, who records a case of extra-uterine gestation, a subject attracting considerable interest among obstetricians at the present day.

Among the seventeen surgical papers are several of great value. One of the most interesting of these occurs in the second volume, entitled "On the Use of a New Substance, Silkworm Gut, for securing divided Arteries," by Mr George Fielding, surgeon, Hull. The members will pardon me if I draw their special attention to this long-forgotten but most interesting and instructive paper. Mr Fielding's great desire was to find a substance "likely to be absorbed or dissolved in the animal fluids, and yet to possess sufficient tenacity to remain long enough upon a divided artery to secure the union of its coats." With the view of solving this problem he made experiments in 1823 (sixty years ago) on some animal substances which he thought likely to be absorbed, and on the suggestion of his assistant, a Mr E. Heseltien, he tried the substance known by the name of silkworm gut—a substance much used by fishermen at the end of their lines, and which may "be procured at any of the shops where toys or fishing-tackle are sold." I quote Mr Fielding's own words:—"Previous to employing the substance upon the living body, I cut out portions of a vein from a subject, and, after tying knots of the gut upon them, immersed them in a bottle containing fresh serum. The bottle and its contents were kept at a moderate heat for two or three days, and at the end of that time the knots were apparently as secure as when first made. This experiment showed that the substance retained its tenacity long enough to produce union of the coats of the vessel to which it was applied at a temperature nearly corresponding with that of the human body."

Mr Fielding's first experiment in actual practice was on 10th August 1823. He says, "I extirpated the left testicle of a patient æt. 30. The gland was large, weighing upwards of 12 ounces. A considerable portion of the scrotum was removed at the same time with the testicle. The spermatic artery was tied naked with a very small silk ligature. Three pretty large arteries of the scrotum were secured by means of the gut, and the ends cut off close by the knots.

"The divided edges of the scrotum united by the first intention, except where the ligature of the spermatic artery was left out; a slight suppuration took place about this, which came away on the eleventh day. We saw no more of the ligatures upon the other arteries. The patient was discharged cured on the eighteenth day; and there can, I think, be little doubt, if the other substance had been used upon the artery of the cord, the whole wound would have healed by the first intention."

He relates a considerable number of other cases in which he tried it, some of them being amputations above the knee, and in all of which it answered remarkably well. Mr Fielding stated that the vessels were secured effectually; that in no case was any appearance of the knots seen, though carefully looked for at every dressing; and that in no case was there any abscess or other inconvenience following its use.

He concludes by saying, "The vessels are as secure, the wounds heal sooner, and the patients suffer less pain during the cure than by the methods in common use. The subjects were not at all selected for the purpose, but were taken as they occurred; some of them were anything but favourable for the trial of any new process."

Mr Fielding was thus half a century in advance of his fellow-surgeons; and it is somewhat remarkable that such an improvement in surgery as that suggested by Mr Fielding, communicated to this Society, and published in its Transactions, should have been entirely overlooked by the surgeons of later times.

There is an interesting paper by Dr J. Boggie, Surgeon to the Forces, on "Hospital Gangrene, with reference to the Disease as it appeared in the British Army during the Peninsular War." The same author has also an excellent paper on "Gunshot Wounds of the Extremities," illustrated by a case. Professor Andrew Duncan, jun., contributed two valuable papers on "Diffuse Inflammation of the Cellular Substance." Professor James Russell communicated an interesting paper on a peculiar affection to which the bones of the head are liable. Mr J. F. Macfarlan, the founder of the well-known chemical firm of J. F. Macfarlan & Co., related the case of a severe injury of the head, with supposed transverse fracture of the base of the cranium, from which the patient recovered.

Dr Richard Huie has a very interesting case of the removal of a polypus of great size from the root of the tongue. A ligature was tied round the pedicle, and on the fourth day the tumour came away entire. The tumour is in the Museum of the Royal College of Surgeons. It was oval in form, weighed an ounce, measured 5 inches in its long and 4 inches in its short circumference.

Two of the papers relate to ophthalmic surgery,—one on "Exanthematous Ophthalmia," by Mr James Wardrop, Surgeon Extraordinary to the King; the other on "Chronic Inflammation of Iris," by Mr Alexander Watson, beautifully illustrated with coloured drawings. Mr Wardrop remarks in this paper, "that although several of the patients affected with this disease were or had been treated by courses of mercury, the remedy considered most likely to arrest its progress, this desired event did not take place." Two of the papers treat of "Hernia,"—one a remarkable case of crural hernia, by Sir George Ballingall, in which he strongly recommends an early resort to operation wherever any vestige or remains of hernia exist in combination with obstinate obstruction of the bowels. The other paper is a "Case of Strangulated Umbilical Hernia," in which the operation was performed with success, by Dr James Simson.

Two papers refer to cases of extraction of calculi from the female bladder by dilatation of the urethra,—one by Dr Robert Hamilton, in which he used to a small extent the bistoury in addition to dilatation. The calculus weighed 1 ounce. Its long circumference measured 4½ inches, and its short 1¼ inch. She was completely cured.

The other case was recorded by Dr Alexander Ramsay, Dundee. In his case the urethra was gradually dilated for some weeks, and the calculus was successfully extracted without cutting. The calculus measured 5½ inches in its long circumference, and 3½ inches in the short, and weighed 7½ drachms. Another paper is by Sir George Ballingall, entitled "Case of the High Operation of Lithotomy, in which unusual Difficulty was experienced in the Extraction of the Stone; with a Drawing." The difficulty was caused by the stone being large, friable, and encysted in the fundus of the bladder.

Two of the surgical papers relate to affections of joints,—one by the anatomist Knox, on a "Remarkable Alteration of the Structure of the Patella," produced apparently by the presence of a loose cartilage within the cavity of the knee-joint, with beautiful illustrations. The other paper is on the "Dislocation of the Hip and Shoulder Joints," by Dr Adam Hunter.

Physiology.—Eight of the papers are devoted to this branch of medical science. There is a very able and interesting paper on sympathy by Professor Alison, with special reference to the doctrines of Mr Charles Bell, in which he expresses his firm conviction, *first*, that what are called sympathetic actions are, in generala, ctions caused by sensations; and *secondly*, that no anatomical explanation can be given of the fact that certain sensations act on certain nerves only. Another, by Dr John Davy, "On the Effects of the Sun's Rays on the Human Body," is a paper of great interest. The author treats (1) of the changes connected with the discolouring effect of the sun's rays; (2) of the part of the skin in which the discoloration takes place; (3) of the cause of the change of colour, and of the manner in which it operates; and, lastly, of the consequences of the discoloration of the skin. A third paper is by Dr C. J. B. Williams, on "Respiration and Animal Heat, with Experiments," from which the author concludes that the change effected on the blood in the lungs consists in the acquisition of oxygen and the loss of carbonic acid. In regard to the power by which this change is produced, the author believed that it arises principally, if not entirely, from a chemical affinity subsisting between the gases and the blood, and that in the process of arterialization the oxygen absorbed displaces the carbonic acid gas from venous blood. A fourth paper is on "Cutaneous Absorption, with Experiments," by Dr John Dill, from which he draws the following conclusions:—(1.) That the body in general increases in weight when in the bath; (2.) that when its weight is unaffected by immersion, something must have been absorbed by it to answer the natural expenditure of the system, which has been apparently suspended during the experiment; (3.) that when its weight is diminished, this arises either from an inactive condition of the cutaneous absorbents, or from the temperature of the bath being so high as to accelerate the action of the heart and arteries, and thus increase the perspiration; (4.) that the additional weight acquired during immersion cannot be accounted for either on the supposition of an increased pulmonary inhalation or of a diminished evacuation by the skin; and lastly, that the most simple and satisfactory method of accounting for this increase of weight is by admitting the doctrine of cutaneous absorption. A fifth paper is by Dr John Davy, on "The Effect of Removing Atmospheric Pressure from the Fluids and Solids of the Human Body," in which he contends that in the healthy body there is no free air contained in any of its fluids or solids. A sixth paper, also by Dr Davy, is on "The Specific Gravity of Different Parts of the Human Body." A seventh paper, by the same, will be read with great interest. It is an account of some experiments on different parts of the human body—(1) on the effects of desiccation; (2) on the effects of tannin. Another paper of great value is entitled "Observations on the Causes of the Sounds produced by the Action of the Heart," by J. W. Turner, Professor of Surgery to the Royal College of Surgeons. He is disposed to conclude that the contractions of the auricles and of the ventricles communicate only one sensation, the first of the two sounds of the heart, and that the second sound is caused by the impulse occasioned by the falling back on the pericardium of the relaxed heart in its diastole, after it has been elevated or moved from its place in the systole, and possibly also in part by the ventricles attracting the blood by suction into their cavities.

Six papers treat of pathological subjects. Two are by Dr George Kelly of Leith. The one gives an account of the appearances observed in the dissection of several persons whose bodies were found near Leith during a severe snow-storm in November 1821, and who had died of starvation and cold. The other is entitled "Reflections on the Pathology of the Brain." This second paper is a supplement to the first. In these papers we have a careful record of many experiments on the bloodvessels which go to the brain, and the author concludes by saying that "nature has guarded with peculiar care the brain and its vessels against such accidents from repletion and depletion; and that while the structure of this organ remains *healthy* and *unchanged*, and *its vessels sound*, those causes are little capable of causing plethora, congestion, effusions, or comatose conditions." Sir George Ballingall showed to the Society a skull which exhibited some remarkable morbid appearances, and gave an account of it and of the person from whom it was obtained. There is a good drawing of this skull accompanying the paper. Another paper of great interest is by Dr John Davy, entitled "Observations on the Temperature of the Human Body after Death." On one occasion he observed a temperature of 108°, and in another it was 113°. He advances the opinion that these high temperatures were generated during life. In the case of the highest temperature the body was examined three and a half hours after death, the temperature of the room being 86°. Dr John Davy has a very interesting paper recommending sulphurous acid as a preservative fluid for anatomical specimens. He shows that it is a powerful antiseptic and possesses many qualities not possessed by other fluids. He recommends it, also, to the botanist for preserving delicate plants. The remaining paper on this branch of medical science is by Mr James Brown, surgeon, Dominica. This is a paper to illustrate certain morbid preparations which he presented to the museum of the Royal College of Surgeons. Some of these specimens are very rare, if not unique. Amongst them is a case of rupture of the heart; another is a case of death from lumbrici. The lumbrici had taken possession of the stomach and intestines, and had penetrated into the liver. In the liver they were found in the vessels of the vena portæ; whilst another case was that in which the skin of a negro had changed from its natural black to a white colour.

There is one paper devoted to comparative anatomy, in which we have an excellent description of the viscera of the common swordfish, *Xiphias gladius*, Lin., by Dr Robert E. Grant, Professor of Zoology in the London University.

The remaining six papers are devoted to malformations. One of these is an interesting case of "Hydrocephalus with Bifid Brain," by Professor Andrew Duncan, jun., with a description of the malformation by Dr John Gordon. The infant, a female, was born hydrocephalic, and lived seven months. Another of these papers is by the celebrated anatomist Knox, entitled "Case of a Congenital Disease or Malformation of the Thigh Bone," illustrating the pathology of interstitial absorption of the *cervix femoris*. There is a very interesting case of "Malformation of the Heart," by Dr W. F. Holmes, Montreal, communicated by Professor Alison. This was a case of imperfect double heart. The following is the course of circulation in this curious case, who died at the age of 21 years:—"The blood, entering the right auricle by the two cavæ, passed almost entirely into the left ventricle, a small portion probably finding its way into the left auricle. A part of the blood would pass, during the diastole of the ventricles, from the left into the right ventricle, and be propelled through the lungs, to be returned into the left auricle." A good drawing of the malformation accompanies the paper. Another of the malformations is that of an infant in which the stomach terminated in a *cul de sac*, by Mr John Crooks, surgeon, Kilmarnock. This case is not unlike one which I met with in my practice a few years ago, an account of which I published in the *Edinburgh Medical Journal* for August 1881. In my case the *cul de sac* was in the ileum. Mr Crooks's description of the rest of the alimentary canal applied also to my case —"The intestines, extremely small and contracted, were gathered like a bunch of worms." Dr Charles Hastings of Worcester gave a description of a monster in which the upper and inferior extremities were entirely awanting; a good plate illustrates this paper.

The last of the papers on malformations is by Dr Andrew Berry, and is that of a so-called twin-monster. The children (Chinese) were females, and lived till they were nearly 7 years old, when the death of the one caused the death of the other. They were united together exactly as were the Siamese twins, and, like them, had only one navel. A good drawing of this monstrosity accompanies the paper. This, as in all similar cases, is evidently the result of the splitting of a single ovum, and in no case the result of the union of two ova.

I have thus endeavoured to give the Society a brief, and, I fear, very imperfect sketch of the papers contained in the early publications of the Society, but I have said enough to show the members of the present day that from the very first the communications read before the Society were of great value, many of them written by men of whom Edinburgh and the profession are so justly proud.

I would add in conclusion that the first volume contains a list of members. That list is as follows:—2 hon. members, 85 ordinary members, and 107 corresponding members. Of these only two survive—Dr Robert Renton and Mr William Brown.

Part Second.

REVIEWS.

The Law of Sex; being an Exposition of the Natural Law by which the Sex of Offspring is controlled in Man and the Lower Animals, and giving the Solution of various Social Problems. With 40 illustrative Portraits. By G. B. STARKWEATHER, F.R.G.S. London: J. and A. Churchill: 1883.

WE have before us a goodly-sized volume, written essentially on the lines of a scientific monograph, in which the author "claims to make known a new discovery of a great law of nature, nothing less than the law which governs the sexes, and whereby the sex of offspring can be controlled," the discovery being the result of twenty years' study and observation.

In the opening chapters the writer modestly asserts himself as a sort of *Deus ex machina*, who now steps down to solve a problem which Darwin had confessed beyond his powers, and, still further to add to the glory of his achievement, he devotes a chapter to the difficulties which have lain in his way, but adds that "with patience and study order will gradually appear amidst the chaotic accumulation of facts as our inquiry proceeds; . . . and before he closes the volume the reader's confidence will grow stronger as the circle of facts explained grows wider, and the refractory facts one by one settle into their places, helping to support the theory they have so long seemed to oppose." Such, then, is the task the writer has set himself. Let us see how he has accomplished it.

First he plays a game of skittles with the "fallacies of current theories," and refers to a list of over 1000 writers who have (unsuccessfully, of course) essayed to fathom the mystery of sex. One difficulty he does not mention we should submit to him for demolition, and that is, that twins from the same ovum—a circumstance easily recognised from an examination of the membranes at birth—are always of the same sex, while twins from separate ova are not necessarily so.

But let us pass to Chapter VI., where we have the author's theory condensed into a couple of lines thus:—"Sex is determined by what I shall designate as the *superior* parent; and also that the superior parent produces the opposite sex." What an insight we are thus enabled to have into the domestic affairs of our neighbours! Poor A. has six stalwart sons. The gray mare's the better horse there, at any rate. But, fortunately for those in whose families there is a preponderance of their own sex, we are told that the author does not use the word superiority in its ordinarily understood sense, but that he means by it something more intricate and complex, "some increase of functional energy in any part of the body,"—something akin to electricity, and resembling the actinic rays of the spectrum, and something which we, or the author, at least, can judge by temperament, activity, energy, will, features, colour, physique, bodily health, nutrition, etc. Now all this, stated as we find it in the book, has an appearance of abstruse science about it, and we were hardly prepared to find the author confessing, at the end of the chapter, that "he was aware that nothing conclusively definite had been here stated as to the real nature of superiority," though, from his asserting himself able to predict, and even to control, the sex of the babe unborn, we are forced to the conclusion that he, at any rate, knows superiority when he sees it. Nor does he succeed in making the matter much clearer to his readers in the amusing chapter where he discusses seriatim the indications of superiority, treating of noses, eyes, ears, the colour of the hair, etc., and emphasizing his remarks by references to the forty portraits at the end of the book—portraits which have evidently been culled from some fourth-rate comic paper. Further to enforce his remarks, he pairs off these hypothetical individuals, telling us that were Mr A1 married to Miss B1 the resulting family, even though it mounted to twenty, would certainly be entirely of the female sex, and this chiefly on account of Mr A1's "superior" nose. This at once suggests to us an explanation of the frequency with which titles pass out of the direct male line, our male aristocracy being noted for their good noses. Now that this secret is out, we have no doubt that our surgical friends will find profitable and useful employment in depriving sonless dukes of their aquiline nasal organs, or at least in modifying them; for have we not the author's assurance that, except when the superiority is very great, it is quite within the power of the individual to modify it? True, among the means he proposes for this end, in a chapter on "control of sex," such decided measures as nose-paring is not mentioned; but in all seriousness we would offer him the above suggestion, in the belief that it is quite as valuable as are any made by him, and quite as likely to occasion the desired temporary alteration in superiority as would be the husband's riding a tricycle or the wife's giving up novel-reading. The whole fabric of what is all through the book styled "my theory" stands or falls—in our opinion, the latter—on what constitutes superiority; and the author has made this quality such a conveniently vague and complicated one, that we would suggest as the simplest definition of it, an unknown quantity possessed by the parent who begets a child of the opposite sex.

Among the verifications of his theory from observed facts, the author mentions the preponderance of boys which he has noticed in the families of medical men. He was not prepared to find this, evidently. He thought highly of our profession; but when "he became more familiar with the faculties essential for its practice, and the temperaments which characterize its exponents, he discovered that they afforded the strongest possible confirmation of his views," —in other words, that we are an inferior set altogether, and that a doctor should be judged according to his family, a good man having many daughters. We feel constrained, therefore, in the case of members of the medical profession, to modify Punch's famous advice to those about to marry into Marry an idiot, so that your reputation may be assured in the future.

In dealing with historical facts, the author surpasses himself in his skill in making everything point his own way. A. is very superior to his wife, but has three sons. Ah! but A. drinks, hence his superiority is apparent only. Then we are told why Mary Queen of Scots had a son, and why the Empress Maria Theresa had twelve daughters and four sons. The Empress "could not bear to have the windows closed at any season of the year." "This reveals a great deal," says the author,—"a sanguine temperament, a preponderance of the fleshy and physical over the nervous." "I find," he says, "conflicting statements regarding her husband, but as long as the above quotation stands unimpeached, the case I hold to be in my favour." Certainly a rather sweeping deduction to make from the fact of Maria Theresa's liking fresh air.

We will not follow the author in his chapter on the "control of sex" further than to say, that any one who may believe the theory will find in it ample directions for the begetting of sons or daughters at pleasure, provided always he be not hopelessly superior or inferior to his spouse.

A concluding chapter, written in a highly utopian strain, deals with "the influence of my theory on the human race," and here the author expresses his conviction that a judicious control over the sex of generations yet unborn would result in a happy solution of all the social problems and difficulties that have vexed humanity; but we hardly think it likely that men and women will make such elaborate preparations as recommended in this book before they undertake the duty devolving on them of multiplying and increasing.

In conclusion, we would express our conviction that the author has only succeeded in making for himself a place among the thousand odd writers who have unsuccessfully considered the subject.

Elements of Surgical Pathology. By AUGUSTUS J. PEPPER, M.S., M.B. Lond., F.R.C.S. Eng. London: Cassell & Co., Limited: 1883.

IN the words of the author, this is intended as "A small manual on surgical pathology, suited to the requirements of students preparing for the final examinations," and we incline to the belief that his purpose is good. The work is divided into ninety-four chapters, each one dealing with some special portion of the subject in hand, commencing with the study of inflammation, and ending with a description of the various tumours. Among the points we would specially notice is the chapter upon simple surgical and traumatic fever, and quote a sentence from it as an example of the judicious combination of practical and pathological points by which he frequently, throughout the whole volume, endeavours to seize the reader's attention and fix in his memory important truisms and facts. Thus he says, when treating of the condition of a wound, "A well-formed layer of granulations is a strong protection against absorption, for the direction of the osmotic current is away from the bloodvessels, and granulations have no lymphatics."

In the chapter on septicæmia and pyæmia he gives the various theories as to those conditions, and shortly explains the views of such as Billroth, Burdon Sanderson, Bergmann, W. Cheyne, Koch, etc., upon the subject and its probable causation, touching here, also, upon symptoms, and, of course, on post-mortem appearances.

Occasionally points may be omitted; *e.g.*, in treating of hyperpyrexia as a cause of fatty degeneration, we did not find mention of the preliminary granular change which occurs in the protoplasm of the ultimate tissues, and which may be recovered from or pass into the above degenerative charge. The chapters upon trophic lesions, syphilis, union of wounds, and on bone, are especially worthy of attention. The author is not a confirmed believer in the necessary presence of the "bacillus" in tubercle, as he says, "Before this point can be satisfactorily settled, it must be shown that the bacillus is invariably present, and that it is the cause, and not the consequence or coincidence, of tubercular inflammation."

We quite agree with him in thinking that it would be well to discard the word "caries" as the name of a disease, and to describe each variety of rarefying ostitis under its special descriptive title, *e.g.*, simple rarefying ostitis, strumous rarefying ostitis, superficial rarefying ostitis, etc., by which much confusion would be avoided.

The last fourteen chapters are devoted to tumours, the various forms of which are described shortly and succinctly, the chief points in the pathology and clinical history of each being necessarily dwelt upon.

The work is illustrated by boldly drawn wood engravings, on the whole good, executed by Berjeau—many new, some we have seen before in other works, but as such always acknowledged. We can recommend this manual especially to those who desire a short and concentrated account of the subject in hand; but it must not be supposed that it can take the place of other important and more extended works upon surgical pathology. The volume forms one of the series of manuals issued, or being issued, by Cassell & Co., Limited, and, like those already in the hands of the public, is well got up.

A Manual of Surgical Operations. By JOSEPH BELL, F.R.C.S.E. Fifth Edition, Revised and Enlarged. Edinburgh: Maclachlan & Stewart: 1883.

IT has been our lot to see within the last year or two a large number of manuals both from this and from the other side of the Atlantic, all dealing with the subject of operative surgery. Of all these we have no hesitation in saying that Mr Bell's is the most reasonable, practical, and reliable.

The book is modest, yet thoroughly confident in its tone. The experience which Mr Bell has had as senior surgeon to the Royal Infirmary enables him also to speak with authority.

The fact that this is the fifth edition of the manual is itself sufficient proof of its popularity and excellence. We have every confidence in recommending it to students and to the profession generally.

The Treatment of Wounds. By D. LEWIS S. PILCHER. Wood's Library of Standard Medical Authors. New York: William Wood & Co.: 1883.

THIS is a large book, with a most imposing appearance. It contains a considerable amount of information on the simple subject of which it treats. It is illustrated by a number of engravings (116), which are all taken from well-known authors (mostly from Esmarch) and duly acknowledged, which is something more than most transatlantic writers take the trouble to do. The directions for treatment are sound and reliable, being mostly the opinions of leading surgeons in all parts of the world.

Surgical Experiences in the Zulu and Transvaal Wars. By D. BLAIR BROWN, F.R.C.S. Edin., Army Medical Department. Edinburgh: Oliver and Boyd: 1883.

As this work appeared in series in our own pages, it is not necessary that we should give any extracts from it. In its present form it is a most valuable addition to surgical literature. Mr Brown deserves credit for the way in which, under great difficulties, he performed important operations and treated anxious cases successfully. No less creditable to him is the careful way in which he has preserved and recorded the histories of his cases. To those who have not already read this book we recommend it as both interesting and instructive. It is an important addition to the history of the unfortunate Zulu and Transvaal wars, and gives one a very vivid idea of the desperate character of the fights, and the sufferings our poor soldiers have to go through in order to please or carry out a whim of some one in power at home. We think that the study of such books as this would tend to make war less popular.

Mr Brown has illustrated his work with a series of beautiful plates, showing the results of injuries and of treatment. There is also a table of the cases, with the nature of the injury given, which makes the book more valuable.

Excision of the Knee-Joint. By G. E. FENWICK, M.D., C.M., Professor of Surgery. Montreal: Dawson Brothers: 1883.

PROFESSOR FENWICK recommends a modification of the ordinary method of operating which may prove useful in some cases, at any rate. In removing the slices of bone, he uses a fine fretwork saw fitted in Butcher's handle, and saws the femur convex, the tibia concave, from before backwards. The advantages of this procedure are, he says, that the epiphyses are saved, there is less shortening, and displacement by rotation is prevented.

Twenty-eight cases are reported. There were two deaths. In two cases subsequent amputation was necessary. The last fifteen cases were treated "with full antiseptic precautions, and all recovered."

Professor Fenwick uses always Dr P. H. Watson's apparatus, put up with plaster of Paris or paraffin. The latter he prefers for children, as being light and waterproof. The book is abundantly illustrated with photographs and woodcuts.

Tripier's Amputation of the Foot. By P. J. HAYES, F.R.C.S.E. Dublin: 1881. Reprinted from the *Dublin Medical Journal.*

MR HAYES, in the above paper, gives an account of two cases in which he successfully performed Tripier's operation. The procedure is a modification of Chopart's amputation through the tarsus. The well-known result of the latter operation, where retraction of the heel occurs to such an extent as to bring the cicatrix on to the ground, is prevented by sawing off the lower and posterior portion of the os calcis. By this procedure, also, an opportunity is afforded to the surgeon of ascertaining whether there is any disease in that bone. The advantages of Tripier's operation, as stated by Mr Hayes, are four:—1. A good covering; 2. Preservation of flexion and extension of the ankle; 3. Means of ascertaining whether there is disease existing in the os calcis; 4. A broad, flat surface, on which the patient can walk.

Without disputing Mr Hayes's statements, we would say that all these advantages, and more, are obtained in Syme's amputation. The heel-flap cannot be surpassed; mobility of the pad on the end of the stump is always present if the operation be properly performed; the whole tarsus is removed, and therefore the disease cannot recur there: and the surface of bone left for bearing the weight of the body is all that could be desired. Beyond this, Syme's amputation leaves the limb just the proper length for the convenient adaptation of a false foot.

We do not wish it to be thought from the above remarks that we desire to condemn Tripier's operation or Mr Hayes' advocacy of it. We wish only that it should be understood that here we still prefer Syme's. We think Mr Hayes has done good service in bringing again before the profession the real cause of the tilting of the stump in Chopart's medio-tarsal amputation. We see surgeons still ascribing the chief agency to the tendo Achillis, whereas it has been proved long ago to be due to the removal of the anterior portion of the plantar arch, and the pressure in walking on the posterior prominent portion of the os calcis, which causes that bone to be tilted over on its anterior surface. The normal position of the os calcis in walking or standing is oblique, with only the posterior and inferior prominence touching the ground. When the support of the rest of the arch of the foot is removed, the anterior portion of the os calcis necessarily will tend to come to the ground when weight is borne on it. This causes tilting back of the heel. At the same time the astragalus is apt to be displaced forwards, and thus the rotation of the stump is increased. Any one looking at a drawing or skeleton of the foot bones will see at a glance how this occurs, and also how the removal of a portion of the os calcis, in such a manner as to leave a surface at right angles to the long axis of the tibia, will meet the difficulty.

Mr Hayes's pamphlet is illustrated by a clear and well-executed plate.

Immediate Treatment of the Injured in Mines.

THIS is a little eight-page pamphlet, without either author's name or publisher's to grace it. It contains full and simple directions as to the transport of the sufferer, first, along the mine, and afterwards to his home; and also tells what his friends may do and may not do till the surgeon arrives. It will be very useful if distributed among the miners. We believe it is written by Dr Goodall Nasmyth of Cowdenbeath.

Our Eyes and Our Industries. By JOY JEFFRIES, M.D. Brochure. Boston, U.S.

THE author, whose name is familiar in this country as the compiler of a popular book on colour-blindness, has made Javal's articles on the "Physiology of Reading and Writing" the basis of a report, calling attention to the improper care given to what may be called the hygiene of vision amongst the artisan class. He very properly condemns the prevalent prejudice which employers have to the use of spectacles by their workmen, and shows how, in many instances, not only injustice is thus done to the men, but a great deal of skilled labour is lost. The report, which, under the above title, was drawn up for the Massachusetts Board of Health, consists of a popular exposition of the anomalies of refraction, with copious quotations from Javal's papers. The explanations given of these conditions are in the main correct, though the author is evidently rather strongly imbued with the alarmist views held by the Germans on myopia. The increase in degree of myopia found in the same individual as he advances from the lower to the higher forms of his school, as well as the greater proportion of cases of myopia met with in the higher forms, do not necessarily show that the studies have increased or produced that state of refraction. There is a tendency to gradual lengthening of the antero-posterior axis of the globe with the growth of the individual, and this manifests itself as well in the diminution of hypermetropia as in the increase of myopia. In the only instances where a proper examination has been made of conscripts, in which the educated are mixed up with the illiterate, the proportion of myopes amongst the former has not been so much greater as to justify the extreme views now prevalent in Germany, and echoed by the author. There are, undoubtedly, cases of myopia from disease, and in these the myopia is of high degree and rapidly progressive; but they are at least as common, relatively, among labourers, farm-servants, and others who have never had occasion to make great use of their eyes at short distances, as amongst the most learned members of the community. Other cases of myopia, and, in fact, the vast majority of cases of short sight, are as much the expression of a type as are cases of hypermetropia, and as such are equally harmless as far as disease is concerned. There is yet another point which does not seem to be sufficiently kept in view by those who attribute so much importance to study in the etiology of myopia, and that is, that myopia is in itself an inducement to study, owing to the smaller satisfaction which a short-sighted individual finds in other pursuits.

Guy's Hospital Reports. Edited by H. G. HOWSE, M.S., and FREDERICK TAYLOR, M.D. Vol. XLI. (or XXVI. of the Third Series.) London: J. & A. Churchill: 1883.

THE present volume of reports is one of more than ordinary interest. There are twenty papers in all, and every one of these is well worth careful perusal. Mr Bryant's notice of his old friend Joseph Towne, modeller to the hospital fifty-three years, will be of special interest to Guy's men, while his paper on "Surgical Affections of the Tongue," illustrated as it is with several beautiful chromo-lithographs and lithographs, is one that the profession generally will highly appreciate. Mr Davies Colley's article on "Acute Gonorrhœal Rheumatism," Dr Pye-Smith's on "Addison's Disease," and Mr Golding-Bird's on "Flat-foot," will all repay a careful study. Dr Wilk's paper on "Hemianæsthesia" is one of more than professional interest, as some lay contemporaries have already shown; while the articles of Dr Stevenson on poisoning by aconitine and by lead, with special reference to the trials of Lamson and Louisa Taylor, are of the utmost importance to the medical jurist. The volume is altogether very valuable and interesting.

Transactions of the Academy of Medicine in Ireland. Vol. I. Edited by WILLIAM THOMSON, M.A., F.R.C.S., General Secretary, Surgeon to the Richmond Hospital. Dublin: Fannin & Co.: 1883.

THERE is something quite refreshing in the discovery that while a section of the Irish people are said to be pining for separation, union and the strength which it brings has commended itself to the various medical societies in Dublin. Towards the close of last year these agreed to amalgamate, and to constitute the "Academy of Medicine in Ireland;" and the handsome volume before us represents in some degree the aggregate work of the sections. A few valuable papers, it would appear, have been withheld by the authors, and the discussions on the contributions are not reproduced; in this sense, therefore, these "Transactions" are incomplete. All the papers are interesting, and some are of much value. The first contains an account by Mr Barton of a case of intestinal obstruction, in which, on post-mortem examination, the cæcum was found to be twisted twice on its own axis. Mr Kilgariff records a successful case of trephining of the skull for abscess of the brain due to injury. The communication of Mr Beatty on the causation of left-side pain will be read with interest. By this he refers to the pain which is experienced in the region of the lower six ribs on the left, excluding the so-called left iliac pain of women. The kind of pain is described as follows:—"Pain sharp, burning, or occasionally described as dragging, seated over lower few ribs on the left side, combined with tenderness, sometimes extreme on pressure upwards of tenth or eleventh rib; slight tenderness only being felt on pressing up a few of the ribs adjacent; and tenderness also, only slight, on pressing downwards tenth or eleventh rib. Pain relieved by pressing ribs inwards with flat of hand or when patient lies on left side." This pain is due to accumulation of fæces in the transverse colon or splenic flexure. The weight of these causes a drag on the pleuro-colic ligament of peritoneum, which attaches the splenic flexure of the colon to the diaphragm opposite the tenth or eleventh rib. There is tenderness on pressure upwards of the tenth or eleventh rib, because the direction of the ligament being upwards as well as outwards, it is so made more tense. Pressure down does not cause so much tension as may relax it. Pain is felt when patient lies on right side, from loaded intestine falling to right. In this form of left-side pain due to fæcal accumulation the most constant symptom is the great tenderness on pressure *upwards* of the tenth and eleventh ribs. The "Cases of Unilateral Paralysis of the Velum Palati," by Dr Walter G. Smith, are, as one would expect, coming from the pen of so accurate an observer and so accomplished a physician, full of suggestiveness, and open up quite a new line of inquiry. The question he raises is this: "Is such a form of local paralysis a specific affection, or a form of nervous paresis capable of being set up by different acute diseases or by debilitating influences generally?" Paralysis of the palatal muscles has come to be popularly looked upon as an occasional sequela of diphtheria, but such paralysis is in most instances accompanied by paralyses elsewhere. The cases related by Dr Smith indicate that, at least when unilateral, a form of paralysis may arise after throat affections which could hardly be classed with true diphtheria.

Until we can positively decide and agree on what is diphtheria, this relationship must be regarded as undecided. Dr Smith's cases and observations are a step towards this. Dr Wheeler's paper on "Trephining in Mastoid and Tympanic Disease" will be read by surgeons as well as aurists with interest. The subject of puerperal fever is one which for the great majority of medical practitioners possesses a sad attraction, and rouses their interest more than most. Few men who have for any length of time engaged in obstetric practice have failed to encounter one or more examples, and thus one is glad to learn Dr Atthill's views. When Master of the Rotunda Hospital, two points were forced on his attention with reference to puerperal fever. One of these was the very frequent occurrence of septicæmia in women the prey to remorse or suffering from extreme mental distress. Among the victims of seduction this was specially observable, and in them, in the majority of cases, it was pretty clearly due to self-infection, and was not the result of a septic poison introduced from without. In such persons he believes that the anxiety to which they are a prey interferes with the proper involution of the uterus, and absorption of decomposing materials takes place. The other point is, that during the prevalence of epidemics of well-known zymotic diseases puerperal fever may arise from the introduction into the system of the parturient female of the infective material of these. In such cases the action of the infection is modified by the peculiar state of the system and of the blood in such persons, so that the disease developed in them is of an apparently totally different nature. Among those affections which he considers can undergo this metamorphosis are erysipelas, scarlet fever, typhus, and possibly also typhoid. This idea is not new, but has been brought forward before. We particularly miss the discussion on this paper, which must have let in further light on a point which possesses such surpassing interest, and which, if proved, would have an important influence on general practice. Another obstetrical paper which contains much common sense is that by Dr Henry on the "Importance of the Third Stage of Labour." It is meant as a protest against the modern plan of treating this stage which has come to be associated with the name of Credé. Dr Henry advocates *assisting* and *supporting* the uterus during normal expulsive action, as opposed to *irritating* it into too hasty and violent contraction. He says, "I never once regretted the time spent in conducting the third stage of labour, and I have spent an hour and a half; and I also say that I have had good cause to regret, over and over again, the hasty expulsion of the placenta. I claim for this course, with Dr Clarke, an immunity from hæmorrhage and after-pains, as far as after-pains are due to the contractions of the uterus to get rid of clots, and are not of a neuralgic or rheumatic nature."

We have merely noted such papers as have specially attracted our attention by the novelty of the views expressed or the intrinsic interest of the subject with which they dealt. There are numerous others which will well repay study. The volume well inaugurates the first year of the Academy of Medicine in Ireland.

Lectures on Practical Pharmacy. By BARNARD S. PROCTOR, formerly Lecturer on Pharmacy at the College of Medicine, Newcastle-on-Tyne. Second Edition. London: J. & A. Churchill: 1883.

WE have much pleasure in highly recommending this book to the notice of the profession. It is an able and exhaustive treatise on a branch of medical science too much and too long neglected.

The Chinese Opium-Smoker. Twelve Illustrations, Facsimiles of Native Drawings, with a Translation of the Original Chinese Text accompanying them. London: Partridge & Co.

THESE beautifully executed pictures are faithful reproductions, we believe, of twelve illustrations of the evils of opium-smoking which have been for years past circulated among the Chinese by philanthropic Chinamen.

The book, which is prettily got up, is published by the Society for the suppression of the opium trade. They state that they have copied the pictures, etc., from a set published by the Chinese Anti-Opium Society of Canton about six years ago. Various sets of such pictures, we have been told, had been circulated in China long before the present anti-opium agitation.

We can recommend the little book as certainly interesting, and, we hope, profitable, in combating a great and growing evil.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIII.—MEETING II.

Wednesday, 5th December 1883.—DR LITTLEJOHN, *President, in the Chair.*

I. VOTE OF THANKS TO THE RETIRING PRESIDENT.

The President, Dr Littlejohn, on taking the chair for the first time, thanked the Society for the honour he had received in his election to office. It would be his endeavour to maintain the interest and reputation of the Society in the same efficient manner as had been done by his predecessors. It was one of his pleasures in taking the chair that he was to succeed his old friend Dr George Balfour, to whom he would propose a hearty vote of thanks for the excellent way in which he had performed his duties during the past two years.

This was agreed to unanimously, and the vote of thanks conveyed to Dr Balfour.

II. ELECTION OF NEW MEMBERS.

The following gentlemen were elected Ordinary Members:—Henry Newcombe, M.D., F.R.C.S.E., F.R.S.E., Edinburgh; Francis Troup, M.D., Edinburgh; Russell E. Wood, M.B., C.M., Edinburgh; J. MacDonald Brown, F.R.C.S. Eng., Edinburgh; James W. B. Hodsdon, M.D., M.R.C.P., Edinburgh; John Haddon, M.D., Edinburgh; G. Sims Woodhead, M.D., F.R.C.P. Ed., Edinburgh; Thomas Francis Spittal Caverhill, M.D., F.R.C.P. Ed., Edinburgh; R. A. Lundie, M.A., B.Sc., M.B. and C.M., Edinburgh; Arthur W. Hare, M.B., C.M., Edinburgh; Edwin Bailey, M.B., C.M., Edinburgh; Alexander Black, M.B., C.M., M.R.C.P., Edinburgh; Harry Melville Dunlop, M.B., C.M., Edinburgh; George Andreas Berry, M.B., F.R.C.S. Ed., Edinburgh; Hamilton Wylie, M.B., C.M., Edinburgh; James Bennet, M.B., C.M., Leith; A. Douglas Webster, M.B., C.M., Edinburgh; Robert W. Philip, M.A., M.B., C.M., Edinburgh; William M'Neil, M.D., L.R.C.S. Ed., Stranraer.

III. EXHIBITION OF PATIENTS.

1. *Dr J. Jamieson* exhibited a male patient who illustrated the good effects of drainage in empyema. He was a shoemaker, who suffered in the early part of the year from an attack of pleurisy with effusion. This was aspirated, and a large quantity of pure serous fluid removed. In a fortnight the operation was repeated, but the fluid was no longer pure. It presented a turbid appearance, and contained pus. The case was then very unpromising. There was much difficulty of breathing, profuse perspiration, and great debility. An incision was made in the posterior aspect of the chest, a drainage-tube inserted, and the pleural cavity repeatedly washed out through this with warm water well coloured with Condy's fluid. Some time later a swelling appeared anteriorly, evidently connected with the pleural cavity. This was also opened, and the pleura washed out through it. He was afterwards sent to the country with the tubes *in situ.* Having caught cold in Aberdeen, he went to the infirmary there, was admitted, and had the tubes taken out. After a few weeks' residence he came south well, and now bore little trace of his severe illness. The chest on the affected side was only one inch less than on the other side.

2. *Dr Shand* showed a female patient who had recently suffered from a FISTULA OF STENO'S DUCT. The natural opening of the duct

had closed, but its patency was re-established by means of a probe, while the fistulous opening was kept closed by collodion. There was no salivary calculus, and in a short time the fistula healed.

IV. EXHIBITION OF PATHOLOGICAL SPECIMENS.

1. *Mr Duncan* showed the PARTS REMOVED IN A CASE OF NEPHRECTOMY. So far as the specimen was concerned, it was an ordinary case of pyo-nephrosis. The patient was sent to him by Dr Angus Macdonald, with a history of an attack of cystitis during her pregnancy more than a year before coming under treatment. Dr Macdonald had tapped the swelling, and found it to contain seropurulent fluid and urea. The diagnosis was therefore easy. An incision was made in the middle line of the abdomen. The peritoneum, which was granular over the tumour from inflammatory action, was divided to the outer side of the colon, and the pyonephrosis easily stripped from the surrounding textures. The renal vessels were tied with silk. The treatment of the ureter was, he considered, the mistake of the operation. It was divided pretty low down between two ligatures, the orifice left being tipped with chloride of zinc to prevent any septic infection of the peritoneum. For some days after the operation there was a considerable amount of distention of the bowel, and undoubtedly some peritonitis, with a moderately high temperature, but nothing septic. A little discharge was sucked out of the glass drainage-tube left in the pelvis, but it contained no organisms. On the eighteenth day the patient was allowed to sit up—a little too soon, perhaps, because down towards the side of the bladder a slight induration remained. After she got up this increased in size and was painful. A fortnight later an attempt was made to reach it by the aspirator through the vagina unsuccessfully, but a few days after it was incised through the vagina, just too late, as it had opened into the bowel, and she died seven weeks after the operation. The abscess formed in the stump of the ureter. The lesson to be learned from this was a different mode of dealing with the ureter. It had been proposed to take it to the anterior part of the wound and allow it to drain there. In this case he (Mr Duncan) believed that he should have done so, but he missed the meaning of the previous history. For months before there had been no pus in the urine, which meant that the ureter was occluded at the bottom.

2. *Mr A. G. Miller* showed a KNEE-JOINT removed by amputation for advanced disease. The joint had disappeared entirely, there being no synovial membrane nor cavity except the cavity of an abscess. It also showed a complete disorganization of the joint—so much so that recovery could not have taken place without some operation. The patient being eighteen, the epiphysial junction was well marked. Had excision been performed, the epiphysis would have been removed, and further growth of the

bones prevented. Amputation was performed because of the incurability, because of the dislocation backwards, and because of the diminished size of the bones. The disease had lasted twelve years, and the limb had not grown properly. It was three inches shorter than the other. Had excision been done, the shortness would have been increased to four and a half or five inches. He first complained of the disease when six years of age. In a short time he seemed to recover; but four or five years ago he fell and fractured his thigh, after which the disease in the joint got worse till he came into hospital. The operation was done on the 16th November, and the wound had healed, except where the drainage-tube had been.

3. *Dr Blair Cunynghame* exhibited, for Mr Lawson Tait, eight specimens of diseases of the Fallopian tubes and ovaries—"pyosalpinx." (*a.*) A specimen showing CHRONIC INFLAMMATION AND SUPPURATION OF BOTH FALLOPIAN TUBES. The symptoms came on after an attack of gonorrhœa. There was constant pain, amounting to agony, just before and during menstruation. The organs in the pelvis were quite fixed and exquisitely tender. Marital intercourse had been entirely suspended for three years. The operation was difficult and tedious, the bleeding being very free. The incision was 2 inches in length, and a drainage-tube was inserted (*b.*) Two small DERMOID TUMOURS, causing in two separate patients constant and intense pain. One of them was sent to Mr Tait as a case of pyosalpinx. Both recovered, and are quite cured. (*c.*) A DOUBLE PYOSALPINX from a very bad case, the patient almost dying at the time of operation. She had now completely recovered. (*d.*) A DOUBLE PYOSALPINX. A small myoma was also present in this case. The patient had made a good recovery. (*e.*) A DOUBLE PYOSALPINX from what Mr Tait thought was the worst case he had ever had. The contents of the tubes were horribly fœtid, and had burst into the cavity during the detachment of adhesions. Mr Tait was of opinion that he had not taken enough trouble in cleansing the cavity, for the patient had nearly died. Convalescence had been slow, but she was now in good health. (*f.*) A PAIR OF OVARIES from a young woman (æt. 19), hypertrophied, cystic, and the white tunic greatly thickened, with abundance of new fibre cells. There was no pain, but tremendous menorrhagia. Everything having failed to arrest the hæmorrhage, the appendages were removed. These cases were rare, and the preparations were, in Mr Tait's opinion, very valuable (see Mr Tait's book, last edition, pp. 115, 116). (*g.*) The rarest of all pathological conditions of the ovary, a CHRONIC ABSCESS, removed on account of the persistent pain. (*h.*) A DOUBLE PYOSALPINX. In this case there was a very small amount of pus in the tubes. The patient had been under Mr Tait's care for eight years, and everything had failed to relieve the intense menstrual pain. She had

resisted his proposals to operate for five years, then consented, and was now well.

4. *Dr Kirk Duncanson* showed (*a.*) A MOLLUSCOUS TUMOUR removed from the external auditory meatus in May of the present year. This was the second tumour of the kind removed from the same meatus. The first, a portion of which and a microscopic preparation of it were also shown, had been excised about eight years previously, and the case recorded in the *Edinburgh Medical Journal* for November 1877. The first tumour rose from the anterior wall of the meatus and passed into the tympanum, pushing aside the tympanic membrane, and, pressing on the portio dura, caused paralysis of the right side of the face. On the second occasion the tumour arose from the posterior wall of the meatus, encroached on the mastoid cells, and pushed inwards the dura mater in the neighbourhood of the lateral sinus. There were two small points of ulceration just over the sinus, from which the danger of hæmorrhage was very great. When the tumour was removed, the cavity in the mastoid cells would have admitted of a large walnut. (*b.*) Two specimens of KERATOSIS OBTURANS, and a plug of wax, ceruminosis obturans, to show the distinction between them and the cholesteatoma (*a*). (*c.*) A plug of COTTON-WOOL taken, on 4th November 1883, from the meatus of a patient, who asserted that it must have lain there for over forty years. It had not given rise to any distention of the canal. (*d.*) Two specimens of POLYPOID GROWTHS which occurred in patients, the subjects of acquired syphilis, after the removal of a hardened plug of wax. There was some little bleeding, as often happened in these cases, and a clot having formed in each, became organized. One of the growths was removed about three weeks after its formation, the other a few days after. In the first case a small vessel, passing from the membrana tympani into the growth, bled on its removal. (*e.*) A portion of a MUTTON BONE coughed up by a patient when having applications made to her naso-pharynx for catarrh of the Eustachian tubes. She said it must have lain in her lungs four years.

V. EXHIBITION OF MICROSCOPICAL SECTIONS AND DRAWINGS.

Dr Byrom Bramwell showed (*a.*) a CONGENITAL MALFORMATION OF THE GRAY MATTER in the upper cervical region of the spinal cord. There was a mass of gray matter detached from the rest and placed between the anterior cornua. (*b.*) A MULTIPOLAR NERVE-CELL with TWO NUCLEI. This was a rare condition, the only one Dr B. had himself seen. (*c.*) A preparation from a case of myelitis, showing a VACUOLATED NERVE-CELL. The cell was completely filled with small vacuoles. (*d.*) A section of the cord in a case of COMPRESSION MYELITIS. A tumour pressed on the cord in the dorsal region, and its whole tissue was in consequence degenerated, the nerve-structure being entirely destroyed. (*e.*) SECTIONS OF

THE SPINAL CORD IN MYELITIS. Four of these showed the appearances of the cord of a man who had been admitted to one of the Liverpool hospitals under Dr Dickinson. The patient had been healthy till three weeks before, when he was seized with paraplegia. There was nothing to account for the condition, except that he had had a severe attack of syphilis two years previously. When the cord was examined, patches of myelitis were seen scattered in various parts, most marked in the dorsal region. In two of the sections shown the bloodvessels were enlarged, and in one there were also extravasations of leucocytes into the surrounding tissue of the gray matter. In another hypertrophy of the axis cylinder processes was observable. Lastly, there was a section from the medulla of a man who had died under Professor Annandale's care. He had been cut for stone, and soon after the operation was seized with hemiplegia. Sections of the medulla at first showed nothing to the naked eye; but after careful examination a little localized softening, without any alteration in colour, was observable. Under the microscope there was a well-marked lesion following the course of the bloodvessels, and hypertrophy of the axis cylinders.

VI. ORIGINAL COMMUNICATIONS.

1. *Dr Craig* read his paper ON THE EARLY PUBLICATIONS OF THE MEDICO-CHIRURGICAL SOCIETY, which appears at p. 623 of this Journal.

The President, in conveying the thanks of the Society to Dr Craig, said that many of the older members knew the three volumes, and thought highly of them. They were occasionally to be picked up at bookstalls, and were well worthy of perusal.

2. *Mr J. Symington* read a paper entitled A NOTE ON THE FOLD OF THE NATES. He showed, by a reference to the literature of the subject, that the lower border of the gluteus maximus is considered to correspond to and to form this fold. The only author who disputes the accuracy of this statement is Luschka, in his *Anatomie des menschlichens Beckens*, published in 1864. He describes the fold as extending outwards below the ischial tuberosity towards the great trochanter; and he considers it due to a pad of fat and fibrous bands which pass from the skin through the fat to the ischial tuberosity and farcia lata. Mr Symington showed drawings of dissections and sections of the gluteal fold and gluteus maximus, to prove the incorrectness of the usual statements. He also demonstrated it on the living subject, showing that in the contracted condition of the muscle its lower border could be traced. It was shown that the lower border of the gluteus maximus, passing from the tip of the coccyx to the juncture of the upper and middle thirds of the shaft of the femur, was really more internal than inferior. The gluteal fold, on the other hand, extended outwards and slightly upwards. In an average adult the inner end of the lower border of the gluteus maximus was 3 or 4 inches above the inner end of the gluteal fold, while the outer end

of the lower border of the muscle was 2 or 3 inches below the level of the fold. The fold, in fact, crossed the lower border of the muscle, and extended on to its posterior surface. Mr Symington referred to the causes of the changes in the fold in hip-joint disease, and attributed them to the fixed position of the limb rather than to atrophy of the gluteus maximus.

Dr Watson was of opinion that Mr Symington had made too much of what he supposed to be an error on the part of anatomists and surgeons. He was not aware that it was ever really taught that the fold of the buttock was formed by the margin of the gluteus maximus muscle; but as the line of the fold of the nates crossed the line of the inferior border of the gluteus maximus, there was no doubt that there was an intimate relation between them. This connexion was quite as definite as that of a given degree of latitude to a given degree of longitude, and the point of correspondence of the fold and muscle did form a definite guide for the incision to expose the sciatic nerve. Mr Symington had certainly shown very clearly that to say that the two lines were identical was absurd; but he did not think that any one who based his anatomical knowledge on the experience of the dissecting-room instead of the cabinet ever believed that the connexion was more than he had indicated.

Mr Miller had some time ago the privilege of hearing from Mr Symington his views on this subject, and of seeing them demonstrated in his (Mr Miller's) wards. He at once believed in them; and, notwithstanding Dr Watson's remarks, he had no hesitation in saying that he had been taught that the lower margin of the gluteus maximus was the same as the gluteal fold. He had even heard this said in the theatre of the Infirmary, when the fold was pointed out as one of the guides to the sciatic nerve in the operation of nerve-stretching. If he understood aright, Mr Symington ascribed the fold to the prominence above it of the tuber ischii and to the natural fold that took place in the change of position of the limb, the superficial structures of the thigh being relaxed when the limb was straight, and put on the stretch when it was flexed. He thought Mr Symington mentioned to him that, as a rule, the fold did not extend deeper than the skin and superficial fascia. If this was so, then the fold must be due to something existing in connexion with the skin and fascia. Mr Symington had told them that the gluteal was continuous with the inguinal fold. This could be ascertained by any one as a fact. The two met at the upper part of the ramus of the pubis. They knew that the superficial fascia was attached to the pubis and its ramus and along Poupart's ligament. This same attachment, which was of importance in connexion with the surgical anatomical subject of extravasation of urine, was of importance in this connexion. He believed that the fold was produced by a drawing on or straining of this attachment, and not by a relaxation, as Mr Symington held.

Mr Symington said that, in spite of what Dr Watson had said, it was an undoubted fact that anatomists and surgeons had taught that the lower border of the muscle corresponded with the gluteal fold. He held that it had more to do with the formation of the natal cleft. Although the two did not correspond, yet as they crossed one another in the position of the incision for the stretching of the great sciatic nerve, the fold did at that point serve as a guide to the lower border of the muscle.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLV.—MEETING I.

Wednesday, 14th Nov. 1883.—Professor SIMPSON, *President, in the Chair.*

THE Obstetrical Society held the first meeting of its forty-fifth session,—Professor Simpson, retiring president, in the chair.

I. The retiring President gave his valedictory address, which appears at page 585 of this Journal.

II. The following office-bearers were then elected:—*President*, Dr Connel, Peebles; *Vice-Presidents — Senior*, Dr Angus Macdonald; *Junior*, Dr C. E. Underhill; *Treasurer*, Dr William Craig; *Secretaries—Senior*, Dr A. H. Freeland Barbour; *Junior*, Dr R. Milne Murray; *Librarian*, Dr Peter Young; *Convener of Pathological Committee*, Dr D. Berry Hart; *Members of Council*, Dr Jas. Young, Dr Gordon, Dr David Wilson, Dr P. A. Young, Prof. A. R. Simpson, Dr Halliday Croom, Dr Playfair, Dr Rattray.

Dr Connel, Peebles, President elect, in taking the chair vacated by Professor Simpson, said that had he been aware beforehand of his nomination by the Council, he most probably would have declined the appointment. He was none the less sensible, however, of the honour which they had done him, nor of the kind feeling of the Society in so cordially confirming their selection. He accepted it as a compliment, not so much to himself individually as to the whole body of their country brethren, all of whom, almost without exception, were actively engaged in practical obstetrics, and many of whom were much interested in their proceedings, and were prevented only by distance and pressing duty from listening to and joining in their debates. He thought that hitherto too little had been expected, he might say demanded, of country practitioners, and that they might possibly exert themselves a little more to deserve the recognition they had that night given him. Edinburgh had always been renowned for its obstetric teachers (and one who took this chair ought to be a teacher in some sort); but it would surely add to their distinction that they should send forth pupils, any one of whom, whatever his sphere, should be able to preside with some measure of respectability at their periodical meetings. He could not hope to preside often; but when he did, it would always be as a learner, and with the full recognition that he was there rather for what he ought to be than for what he was. At the same time, he would endeavour not to discredit in their estimation the class to which he belonged. He begged to thank them sincerely for the honour they had conferred upon him.

Votes of thanks to retiring office-bearers were moved by Dr Taylor and Dr P. A. Young.

III. *Dr Berry Hart*, convener of the Pathological Committee, presented his report.

IV. *Dr Barbour* read a paper by Professor Stadtfeldt, Copenhagen, on FIBROUS TUMOURS OF THE CERVIX EXPELLED IN AN UNUSUAL MANNER, which appears at page 606 of this Journal.

Professor Simpson said that the thanks of the Society were due to Professor Stadtfeldt for recording this unique case. He was not surprised that there had been so little hæmorrhage, because the vascular connexions of fibrous tumours were not great. The chief danger of operative interference in such cases lay in the risk of setting up pelvic inflammation.

Dr Berry Hart mentioned a case in which he recently removed a fibrous tumour from the uterus. Although the operation was quite simple, the patient had a severe attack of pelvic peritonitis.

Dr Peter Young said that he thought the case must have been that of interstitial fibroid tumour.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

CONVALLARIA MAJALIS IN DISEASES OF THE HEART.—The aqueous extract of convallaria majalis, according to Pel, can be given in large doses without any unpleasant effects, save, occasionally, it may produce mild catharsis. As a tonic to the muscular fibre of the heart, and as a diuretic, especially in the weakened condition of the left ventricle in connexion with chronic nephritis, its action is unsatisfactory and inefficient; on the contrary, its stimulating and diuretic effect in occasional cases of organic heart disease, especially in mitral insufficiency with a disturbance of compensation, the action is all that can be desired, yet digitalis acts just as pleasantly, and its duration is longer felt. There are no unpleasant secondary nor after effects to be feared from convallaria majalis, but it will certainly never take the place of digitalis;

indeed, in urgent cases we are recommended not to try the majalis, but to resort to digitalis at once. The preparations used by Pel were manufactured at Cologne, according to the Brunswick pharmacopœia (*Centralbl. f. d. ges. Therapie*, 1883).—*Therapeutic Gazette*, November 1883.

CAFFEIN IN DISEASES OF THE HEART.—Citrate of caffein can be favourably compared with digitalis in diseases of the heart, when an ordinary dose, 1·0 per diem—in exceptional cases 2·0 to 2·5—is given. The good effects of caffein have not been brought out because the dose was not large enough. It has a tendency to act more rapidly than digitalis. Not infrequently the pulse has been known to fall from 160 to 100 in the course of twenty-four hours. Dilatation of the heart and also venous stenosis are very much relieved in the course of two or three days. Caffein has no cumulative action like digitalis, and symptoms of intoxication have not been known to follow its administration. The patients themselves prefer it to the foxglove. The only objection to the remedy is a certain amount of irritation which causes nervousness and restlessness, thereby preventing the patient from sleeping, and then it is very high priced (*Pharm. Post*).—*Therapeutic Gazette*, November 1883.

NITRITE OF AMYL IN THERAPEUTICS.—The author has employed this remedy for five years, and is well satisfied with his results. According to his experience, it is indicated and has good effects in acute febrile diseases of the respiratory organs, where weakness from old age and a high degree of dyspnœa endanger the life of the patient. The action of this drug passes off rapidly—in fact, it ceases when inhalation is suspended. In this manner it may be given for days, if necessary, without bringing on any bad effects. Author thinks the fear of properly employing nitrite of amyl is the reason of its failure in many instances. He applied it by putting five to twenty drops on a handkerchief, from which it may be inhaled, and repeated as often as may be necessary (D. Anhona, in *Gaz. Med. Ital.*)—*Therapeutic Gazette*, November 1883.

PLANTAGO MAJOR AS A STYPTIC. — Mr J. W. Colcord, in *New Remedies* for November 1883, recommends this plant as a styptic. He recommends equal quantities of the expressed juice and of glycerine. He also mentions that the bruised leaves applied directly will prove sufficient. He applies it directly to the bleeding surface, and has found it efficacious. The plant is one of the common weeds around all country houses.

CASTOR OIL AND GLYCERINE.—Dr William Soper claims that glycerine increases the purgative power of castor oil when given with it. A preparation combining, but not mixing, these two substances is active in teaspoonful doses. In the Pharmacopœia of the Hospital of the University of Pennsylvania is the following formula, which we believe is Professor H. O. Wood's:—

Mistura Olei Ricini.

℞ Ol. ricini, . . f. ℥j.
Glycerini, . . f. ℥j.
Ol. menthæ piperitæ, gut. ij.

(*Lancet*, and *Chem. and Drugg.*)—*New Remedies*, November 1883.

LIQUOR ARSENICALIS AS A LOCAL APPLICATION FOR NÆVUS.—Dr W. J. Beatty, in the *British Medical Journal* for 24th Nov., recommends this treatment for nævus. He says, "I was led to try what arsenic would do as a local remedy, and in my hands it has succeeded admirably, my last eight cases having been cured perfectly and painlessly by the local application of this remedy. The preparation I use is the ordinary liquor arsenicalis of the pharmacopœia, with which the nævus is to be painted night and morning until ulceration takes place, and I find that the cure is effected in from three to five weeks. This treatment may not be new, although I have not met with it in my reading, but I venture to put it before the profession in the hope that it may be useful. *N.B.*—In one case ulceration was delayed until the ninth week.—*British Medical Journal*, 24th November 1883.

PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

AT the meeting of the Otological Section of the Scientific Congress in Freiburg, held on the 20th September 1883, Dr Wagenhäuser of Tübingen made some remarks regarding the application of corrosive sublimate in the treatment of some forms of diseases of the ear, recommending a solution of 1-10,000 for syringing out the meatus and tympanic cavity, as well as injecting through the Eustachian tube, in cases of chronic suppurative inflammation of the middle ear. Its high disinfecting and antiseptic reputation, and the fact that it causes no irritation from the extremely dilute solutions required, render it of the utmost value in the treatment of suppurative inflammations of the ear. It is recommended not only for major operations, but also especially in the tedious fœtid suppurations which are frequently met with in cases of perforation of the membrana flaccida of Shrapnell. By using a solution of the above-mentioned strength no symptoms of poisoning need be feared. As the mercuric chloride affects metal, syringes made of hard rubber ought to be employed in its application.—*Monatsschrift für Ohrenheilkunde, etc.*, October 1883, foot of p. 199. In the *British Medical Journal* for 3rd November 1883, p. 879, an interesting article, entitled "Mercuric Chloride as a Surgical

Dressing," by William Robertson, M.B., C.M., surgeon to the Hospital at Kimberley, South Africa, before the above came into our hands, led us to try weak solutions of the perchloride of mercury in several cases of chronic suppurative inflammation of the middle ear, chronic rhinitis, and ozæna. The results we have obtained have encouraged us to its further application in diseases of the ear. Many obstinate cases have yielded to its beneficial action, and the duration of two or three cases of acute suppurative inflammation of the middle ear has been shorter than under many previous remedies tried, such as boracic and carbolic acid. We use our modification of Politzer's method, or the Eustachian catheter, if necessary, to convey a 1–12,500 solution of the mercuric chloride through the Eustachian tube, mastoid cells, and tympanic cavity in cases of chronic or acute suppurative inflammation of the middle ear with an artificial or ulcerated perforation, and then we wash out the external auditory meatus by means of a form of douche we have had in use at the Ear Dispensary now for many years—a vessel containing a considerable quantity of the solution at a proper temperature, which can be readily raised or lowered, or the strength of its current can be modified by means of a stopcock easily controlled by the thumb at the nozzle: an apparatus of great benefit where a large number of ear or nose cases require cleansing or syringing and to be treated in a limited time. Or we use a syringe made of hard rubber by preference with the same or a stronger solution. To thoroughly soften and wash out from the Eustachian tube, tympanic cavity, and mastoid cells dried up mucopurulent secretion, we still use a solution of bicarbonate of soda (a teaspoonful of the soda to a pint of tepid water which has been boiled for some time), as we have for so long used and taught as the best and handiest remedy. After getting rid of the discharge the mercuric chloride, 1-12,000 or 1-16,000, or even weaker, as the case may require, acts beneficially on the softened, excessively secreting, unhealthy, muco-serous surfaces. Before using Politzer's method of inflating the middle ear, the Eustachian catheter, or the method which I adopt, a piece of soft rubber tubing, easily fitted to the nozzle of the air-balloon, the diameter varying to the age or sex of the patient, and in private practice having a separate tube for each patient; the length 15 to 18 inches, sufficient to contain in its dependent portion one drachm of the tepid alkaline mercuric chloride or other solution, to be gently forced along the floor of the nostril through the Eustachian tube into the middle ear along with the stream of air on compression of the air-balloon, which is of course done when the patient has opened the faucial mouths of the Eustachian tubes by any of the suggested methods. The patient should thoroughly rid his nostrils of discharge by using his pocket handkerchief. We find the previously mentioned douche by gravitation which we employ a ready and efficient means for effectually cleaning out the nostrils. The solution of corrosive sublimate, 1-10,000 or weaker, is a thorough disinfectant and powerful antiseptic; its use alone in some previously obstinate cases has entirely caused the unhealthy discharge to cease, and in highly fœtid cases its first application removes the offensive smell and changes for the better the discharge. In the above and weaker tepid solutions it causes no irritation to the nasal, pharyngeal, or tympanic mucous membranes, either in health or when diseased. A medical gentleman attending the Ear Dispensary stated that its good effects arise from its specific action. No doubt many of our more severe and protracted forms of chronic suppurative inflammation of the middle ear are the subjects of inherited syphilis. We are at present adding the injection of tepid solutions of the mercuric chloride into the tympanic cavity to iodide of potassium and bicarbonate of soda solutions in cases of chronic non-suppurative inflammation of the middle ear, the subjects of inherited syphilis, where almost complete deafness exists, and in one case at least the results are promising well in the softening and breaking up of the adhesions which have so much bound together the various structures in the tympanic cavity.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

Lupus and its Treatment.—An original and exhaustive article on this subject comes from the pen of Ernest Besnier, which we may thus summarize:—Discussing first the relation which lupus bears to tuberculosis, he maintains the identity of the diseases, and disposes very satisfactorily of certain arguments which have been made use of in opposition to this view. These are—(1.) That lupus is not hereditary; (2.) That the symptomatology of lupus differs from that of tuberculosis properly so called; (3.) That lupus does not lead to phthisis: a number of illustrative cases are quoted, proving such a result to follow in a considerable proportion of instances; (4.) Experiments on animals have established that lupus is not locally inoculable and is not infectious. Here the negative evidence afforded by experiment does not count for much. Though lupus is a tubercular lesion, it does not develop on individuals previously tubercular; commonly on young persons, however, who are in all likelihood predisposed, owing to a particular condition of their lymphatic system. The place of implantation and development is in the great majority of cases an uncovered part, and this is often determined by a slight injury. There are indications that at least often the lupous lesion is isolated and local, growing, so to speak, on the spot parasitically. As to the mode of introduction of the tubercular element, everything leads to the conclusion that it comes from without and not from within. The initial focus of lupus is small and *superficial*, and if this can be thoroughly destroyed, the disease does not extend further, nor is there any reproduction in that situation. The observations of Besnier, supported also by some of Aubert's, tend to the conclusion that when lupus is treated by methods which cause hæmorrhage there is a greater risk of the occurrence of secondary phthisis. *Internal Treatment.*—In no one case has Besnier seen lupus cured by the administration of cod-liver oil, however useful it may be in some cases in improving the general health. Some years ago Dr M'Call Anderson announced some success due to the employment of iodide of starch in lupus erythematosus, and Besnier thought he could ascribe to iodoform given internally the remarkable cure of the same form of lupus. "I do not know if the learned professor at Glasgow has continued to be as fortunate, but further observation has no longer furnished me with results equally favourable." As regards iodide of potassium, a certain diminution of the mass of the neoplasm may be noticed during the early days of its exhibition, but this is but temporary. In the case of persons affected with lupus becoming syphilized, the iodide, while it removed the syphiloderm, left the patches of lupus absolutely unaffected. Sulphur, while not directly curative of lupus, can, employed as at some of the sulphur-spas, improve the health of such persons. Where there is imminent danger of constitutional infection, treatment of the waters of Cauterets, Eaux Bonnes, Luchon, and Allevard will be of service in warding this off. The arsenical waters of la Bourboule are also valuable in similar cases. *Local Treatment.*—Extirpation may be rejected as seldom applicable and as producing an unsatisfactory cicatrix. Scraping, which at first attracted so much attention, is inapplicable to lupus erythematosus, and in lupus vulgaris its effect is but partial, and by its employment alone a complete cure is rarely attainable. Scarification has been practised in various ways. The best is that where nearly contiguous incisions are made, arranged in lozenge shape like the fine lines of an engraving. The procedure is easy and is locally innocuous, and in the congestive and hypertrophic forms it gives good results. But it does not prevent recurrences, and favours, like the other bloody methods, the development of phthisis. *Chemical caustics—Interstitial cauterization.*—One mode is by the application of solution of chloride of zinc or perchloride of iron after scarification. The applications are painful, and the resulting cicatrices defective. The injection of iodide of glycerine, as recommended by Schiff, has the drawback that it is difficult to regulate the injection into a diseased tissue, so as to avoid excessive action. *Cauterization en masse* would seem theoretically very satisfactory: practically it is not so. In particular, arsenical caustics are to be rejected, because their local effects are often deplorable, and they have, even in experienced hands, caused death by absorption. *Igneous caustics—Cauterization en masse by the red-hot iron.*—This causes an unnecessary amount of tissue destruction, and the resulting cicatrization requires directing and controlling for months, thus necessitating either residence in a hospital, which is undesirable, or continued visits to the surgeon. *Punctated or linear cauterization with the thermo-cautery.*—The galvano-cautery and the thermo-cautery are the agents which are employed exclusively by Besnier in all forms of lupus, and by them cicatrices soft and pliable can be obtained, the neoplasm being entirely destroyed, while the neighbouring tissues are spared as much as possible. The platinum wire is shaped into needles either straight or bent at an angle, which can be used for punctures or scarifications. The platinum should only be heated to a dark red, never to a white heat, otherwise the operation would become bloody, and the dazzling white incandescent point prevents distinct vision. The fine instruments which he figures are specially suited for lupus of the eyelids, conjunctiva, and the buccal, palatine, and pharyngeal mucous membranes, as there is no hæmorrhage. He seldom employs even local anæsthesia. The after treatment is very simple. The wound is simply dusted, and any excessive granulations are touched with a nitrate of silver point. When cicatrization is languid, iodoform constitutes a satisfactory dressing.—*Annales de Dermatologie et de Syphiligraphie*, August 1883.

PYROGALLIC ACID IN THE TREATMENT OF CHANCRES.—This, which has recently been favourably mentioned by M. Vidal, has been tried in a number of cases in the service of Dr Horteloup. He found that, employed as a powder diluted with eighty or ninety per cent. of starch, it caused severe pain, did not favourably influence the chancre, and sometimes set up phlegmonous inflammation. It was found necessary to return to the application of iodoform.—*Annales de Dermatologie et de Syphiligraphie*, August 1883.

ERUPTIONS ASSOCIATED WITH DIPHTHERIA. — Fraenkel of Hamburg describes three forms of eruption met with in the course of diphtheria. The first and commonest, in his experience, consists of petechiæ. Those show themselves either on the first days of the disease or later, sometimes a few days before the death of the patient. Much less frequent are erythematous eruptions. A third form, of which he had seen but one example, was a papulo-pustular eruption on a markedly reddened base, affecting the backs of the hands and outer surface of the foreams. All forms are of unfavourable import, the erythematous least so.—*Monatshefte für Praktische Dermatologie*, September 1883.

REMARKABLE SENSITIVENESS TO IODINE. — Grödel of Bad-Nauheim relates a case where the sensitiveness was extreme. On four different occasions iodine in various ways was employed, with the result of producing in the course of less than twelve hours a copious eruption of urticaria or acne. Two suppositories, each containing half a grain of iodide of potassium, about one-tenth of a grain swallowed, and two paintings with tincture of iodine over a limited area, produced these results in an elderly man at different times.—*Monatshefte für Prak. Dermatologie*, September 1883.

LUPUS ERYTHEMATOSUS.—At the meeting of the American Dermatological Association, Dr Duhring recommended, in obstinate cases of this disease, a lotion of sulphate of zinc as very efficacious. (Zinc. sulphat., pot. sulphuret, āā ʒj., aquam ad ℥iv.) Dr Piffard, however, believed that a cure cannot be effected without destroying the lupus, either by curette or by scarification. Dr Sherwall had used this remedy with advantage in a case, and Dr Van Harlingen bore witness to its complete success in one of Dr Duhring's cases. Dr Fox stated that he had used a combination of salicylic acid and chrysarobin with some success, but that he regarded as the best means painting the part with pure carbolic acid.—*Med. Times and Gazette*, 17th Nov. 1883.

ECZEMA OF THE FACE IN ASSOCIATION WITH PHLYCTÆNULAR KERATITIS.—Galezowski and Daguenet recommend

℞ Ol. cadini, . gr. xv.
Hyd. oxid. rub., gr. vj.
Camphoræ, . gr. xv.
Vaselini, . . ʒx.

—*Progrès Médical*, 29th Nov. 1883.

PERISCOPE OF LARYNGOLOGY.

By G. HUNTER MACKENZIE, M.D., and J. MAXWELL ROSS, M.A., F.R.C.S. Ed.

SUB-HYOID ABSCESS SYMPTOMATIC OF LESIONS OF THE LARYNGEAL CARTILAGES. — M. de Lapersonne, interne des hôpitaux, in a communication to the Société Clinique de Paris, describes two cases occurring in the service of M. le Dentu, in which subacute abscesses appeared in the middle line of the sub-hyoid region. The first was in the person of a man æt. 22, who was neither scrofulous nor syphilitic. A month before its appearance he suffered from cold and hoarseness, and felt a slight pain in the neck. He then observed at the level of the cricoid a swelling, which in a few days attained the size of a small walnut. He had a slight cough, and his expectoration had once or twice been streaked with blood; but auscultation of the chest gave a negative result. The swelling was first aspirated, then incised. The cartilage was observed to be bare. Two months later a fistulous track remained. Hoarseness also continued. Otherwise the patient was well. The laryngoscope showed no alteration of the laryngeal mucous membrane. In the second case, that of a man æt. 28, with a scrofulous history, a similar swelling appeared while the patient had cold and was hoarse. It moved with the larynx and was painful. In a few days it had attained the size of a large walnut, and after aspiration was incised. The cartilage was not so distinctly bare. Two months later a fistulous track down to the thyroid cartilage remained. M. de Lapersonne asks whether these swellings were suppurated cysts, or circumscribed phlegmons giving place to cold abscesses, or abscesses symptomatic of cartilaginous lesions of the nature of chondritis and perichondritis. It is true, he says, that cysts situated in the middle line of the neck (hydrocele) sometimes inflame and suppurate, but when they do, the cartilage is not affected and they heal rapidly. From the fact that the skin moved freely over the swellings he is of opinion that the diagnosis of phlegmon giving place to cold abscess cannot be sustained. He thus comes by exclusion to the view that the abscesses were symptomatic of cartilaginous lesions, a diagnosis confirmed, as he believes, by the denuded condition of the cartilage, the slowness of healing, and the sinus left, passing down to the cartilage.—*Revue Médicale,* 2nd June 1883.

TRACHEOTOMY FOR CROUP AND DIPHTHERIA. — Whenever obstruction comes as a result of deposit of membrane, either diphtheritic or croupous, it is folly to wait, hoping that it may be expelled and that thus the child may be relieved. Such a relief does occasionally come, but the expectation of this relief and the delay occasioned by it has, I believe, cost us many lives, and often places patients in the hopeless position I have described. Even after the lungs had become filled with mucus, and the child was seemingly near dead, I have seen them revive after the operation, and make a permanent recovery, in cases of undoubted diphtheria. I do not pretend to say, nor would I be understood as believing, that every case of croup and diphtheria in which there is laryngeal obstruction demands tracheotomy. A great many of them, even where this occurs, will die before the obstruction becomes so marked as to demand tracheotomy; others will recover, although there may be more or less marked difficulty in respiration for days; but when the condition approaches the one described, when the intercostal spaces are depressed, the respiratory effort laboured, the air in the lungs rarefied, tracheotomy is demanded, and should be performed in every case, no matter how hopeless it may appear.—Dr H. H. Mudd, in *St Louis Courier of Medicine* for June 1883.

A NEW DISEASE OF THE NASAL CHAMBERS.—Dr W. Stump Forwood of Darlington, Ind., draws attention to a disease which is produced in the operatives who are connected with a particular department of the *canning* industry, *i.e.*, the canning of fruits and vegetables, now so extensively carried on. The cans containing the fruits are hermetically sealed (by operatives known as "cappers") with solder before being immersed in a cauldron of boiling water. Muriatic acid is used with the soldering material, and when the hot iron is applied the fumes arise to the "capper's" face and nostrils. The constant inhalation of these fumes, associated as they are with the lead of the solder, may, if precautions are not taken, produce inflammation of the nose which finally results in ulceration, and in scrofulous patients even passes on to perforation of the septum nasi. A little care in keeping to the windward of the fumes, and in anointing the nose, externally and internally, with some oleaginous substance, is said to be all that is necessary to avoid attacks of the disease. [Query, What is the chance of *lead-poisoning* to those who partake of foods canned in this way?]—*Philadelphia Med. and Surg. Rep.*, 30th June 1883.

A HITHERTO UNDESCRIBED MALFORMATION OF THE NASO-PHARYNX.—This is described by Dr J. H. Mackenzie of Baltimore as having occurred in the person of a young lady, æt. 14, who was brought to him suffering from naso-pharyngeal catarrh, otitis media, and spasmodic asthma. This train of events was found to be dependent on a mass of so-called adenoid or papillary vegetations which occupied the naso-pharynx and precluded respiration through the nose. Owing to the fright of the child and her consequent intractability, the examination of the, post-nasal region was made, in the first instance, with the finger. The first object which it encountered in its passage behind and above the soft palate was a thin, sharp ridge, extending from before backward, which proved on further investigation to be the inferior border of a bony partition which separated the naso-pharynx into two lateral halves. The septum consisted of a thin lamella communicating to the touch the sensation of bone, continuous anteriorly with the posterior edge of the vomer, and inserted posteriorly into the posterior superior pharyngeal wall. Superiorly it became fused with the pharyngeal vault. The septum narium was slightly deflected to the left from before backward; the bony lamella had a similar inclination, and seemed to be, in fact, a prolongation backward of the vomer. Its inferior edge was more or less sharp, clearly defined, and curved from before backward and upward, presenting a very marked resemblance to the normal posterior curve of the nasal septum in the skeleton. Its insertion into the pharyngeal wall was on a higher plane than that of its origin, which corresponded with the inferior edge of the septum. Attempts were made to dislocate it, but without success. None of the growths sprang from this dividing septum, which in its entire length was free from irregularities of any kind. A rhinoscopic examination, made some days after the removal of the growths, confirmed the diagnosis to which the previous digital exploration had led. The partition was then seen to be covered by apparently normal, though congested, mucous membrane continuous with that lining the nasal passages and pharynx. The mucous membrane covering the turbinated structures was also congested, but otherwise its condition was normal. Apart from the bony wall, nothing abnormal was detected in either naso-pharyngeal compartment.—*Archives of Laryngology*, vol. iv., No. 3, July 1883.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. Milne Chapman, M.D.

On Supravaginal Hysterectomy, with Remarks on the Principle of the Extraperitoneal Method of Treating the Pedicle (by Thomas Keith, M.D., *Brit. Med. Jour.*, Dec. 8, 1883). —Attention is first drawn to the fact that the natural history of ordinary uterine fibroids is different than that of other tumours in that they seldom prove fatal, and that their most troublesome symptoms cease at the menopause. After mentioning the published operations of Spencer Wells, with a mortality of 20 in 39, Thornton and Schrœder, who lost 20 out of 60, Dr Keith says:—"The best of these results shows an excessive mortality, even if the disease for which the operation was performed were invariably, in time, a fatal one. I cannot accept such a death-rate. Surely surgery can do something better, else hysterectomy should be laid aside." Going on to speak of the necessity for the operation, the writer laments the absence of anything like accurate statistics or observations to enable an opinion to be formed in regard to what he terms the natural history of uterine fibroids. Looking back on his own experience, he states that the vast majority of such tumours gave no trouble whatever, but that in a certain proportion—5 per cent.—there was constant and horrible suffering. Such are the cases the writer would regard as suitable for operation; and wishing to have the opinion of such of them as, having now passed the menopause, are enjoying relief, he has told them of the operation, and the reply has invariably been, "I am so thankful I had no operation." Dr Keith then gives a short account of how he had been led to perform the operation, and thus tabulates his first 25 cases. (See next page.)

In regard to the first of the two fatal cases it is noted that she became acutely maniacal on the fourth day after operation, and remained so till death. The cause of death in the second case was "some form of blood-poison." The health of all these patients since operation continues perfect, and no discomfort or inconvenience has resulted from the abdomen having been so extensively opened. This Dr Keith attributes to his having been careful to close the wound accurately, and not to allow the patient to be going about too soon. In speaking of the treatment of the stump, the writer gives it as his impression that "we must perfect the intraperitoneal method if we are to make progress and improvement." "The results here given show a death-rate of 8 per cent., or 1 death in every 12 operated on, and I am mistaken if this cannot be reduced." "The great difficulty is in knowing what are the cases in which we are justified in advising those who trust themselves to us to run the risk of a dangerous operation, with all its attendant miseries."

TWENTY-FIVE CASES OF SUPRAVAGINAL HYSTERECTOMY.

No.	Medical Attendant.	Date of Operation.	Age.	Weight of Tumour.	Description of Tumour, Adhesions, etc.	Result.
				Lbs.		
1	Dr Perry	Nov. 1873	52	11	Fibrous cystic tumour. Supposed to be an ovarian tumour	Recovered.
2	Dr Low	Dec. 1874	44	12	Solid fibroid, with suppurating cavity. Extremely firm and extensive adhesions	,,
3	Dr Miller	Feb. 1875	40	8½	Soft fibroid; hæmorrhages. Both broad ligaments opened up to fundus	,,
4	Dr Dobie, Ayr	Jan. 1878	23	27	Solid fibroid. Left broad ligament opened up to fundus	Died 9 days.
5	Dr Hunter	April ,,	33	12	Fibrous cystic tumour	Recovered.
6	Dr Kidd, Alyth	July 1879	32	19	Bleeding fibroid. Both broad ligaments opened up to fundus. Much enucleation	,,
7	Hospital	April 1880	28	42	Solid fibroid. Left broad ligament opened up to fundus. Much enucleation	,,
8	Hospital	Nov. ,,	39	21	Solid fibroid; pelvic adhesions. Cystocele and rectocele. Cervix projecting from vagina	,,
9	Hospital	May 1881	29	15	Both broad ligaments opened up to fundus. Enucleation	,,
10	Hospital	Oct. ,,	37	12	Uterus entirely removed. Broad ligaments opened up. Omental adhesions	,,
11	Dr Campbell	March 1882	34	10	Bleeding fibroid. Anæmia excessive	,,
12	Hospital	April ,,	19	9½	Bleeding fibroid	,,
13	Dr Baird	August ,,	38	9	Both ovaries enlarged and adherent. Adhesions in pelvis. Bleeding fibroid	,,
14	Hospital	August ,,	46	34	Soft fibroid. Very extensive adhesions and great enucleation	,,
15	Hospital	Sept. ,,	40	25	Solid fibroid. Very firm parietal, omental and intestinal adhesions	,,
16	From Australia	Nov. ,,	38	12½	Solid bleeding fibroid. Broad ligaments largely opened up	,,
17	Hospital	Dec. ,,	50	20	Solid fibroid. Ovarian tumour, 15 lb., also removed	,,
18	Hospital	March 1883	30	7	Omental adhesion. Attempt to remove ovaries failed	,,
19	Hospital	May ,,	38	5	Broad ligaments opened up to fundus	,,
20	Dr Maclaren	Feb. ,,	50	27	Solid fibroid	,,
21	Hospital	June ,,	38	30	Solid bleeding fibroid. Adhesions very extensive, and firm to intestine, mesentery, and omentum	Died 7 days.
22	Dr Bell	Aug. ,,	40	6	Solid tumour filling pelvis, causing cystocele and rectocele	Recovered.
23	Hospital	Oct. ,,	40	7½	Solid bleeding fibroid. Extensive enucleation. Attempt to remove ovaries failed	,,
24	Hospital	Oct. ,,	41	10	Solid bleeding fibroid. Ovaries could not be removed	,,
25	Hospital	Nov. ,,	27	5	Soft bleeding fibroid	,,

ON CASTRATION FOR UTERINE FIBROIDS (Report of Proceedings at 56th Meeting of German Science Association, Gynæcological Section, *Centb. f. Gynäk.*, No. 44, p. 701).—Wiedow of Freiburg opened the discussion. He suggested that the operation was now thought too little of, because at first it was taken up with too great enthusiasm and tried in unsuitable cases. He collected 63 reported cases, of which 12 had been fatal. In one of Hegar's cases there was a temporary improvement after operation, lasting about six months, followed by increased growth and a return of the hæmorrhage. The patient died a few months subsequently, when the tumour was found to be fibro-cystic and to contain purulent serum. In this case, as in a similar one reported by Schrœder, the tumour was enormous (kolossal). For such cases the writer would give an unfavourable prognosis. Hegar had operated 21 times with 3 deaths. Of the 18 non-fatal cases, 1 terminated as above, while in 17 the result of operation was very satisfactory. Sooner or later the menopause, with shrinking of the tumour, occurred. The writer then showed drawings of Hegar's cases before and after operation, and submitted 4 of the cases for examination. Freund of Strassburg reported 6 cases in which he had operated. All had lived, and in 5 there had been shrinking of the tumours and cessation of the bleeding. In 1 there had been no improvement. In this case the tumour was "kolossal." Hofmeier of Berlin asked what were the indications for castration as opposed to removal of the tumour. Hegar of Freiburg said that size was not the only point that would guide one in answering this question. As regards the danger of the two operations, he said that on an average that of castration was the lesser, though this was not invariably the case. He always had instruments at hand to remove the tumour if advisable when he undertook castration for fibroids. If he found a well developed pedicle he removed the tumour. He regarded castration as a very efficient operation, and thought it should be recommended before the tumour had acquired great size. Kaltenbach of Giessen drew attention to the fact that occasionally the ovaries were situated on the apparent posterior aspect of the tumour, and that thus great difficulty might be occasioned. He reported 2 successful and satisfactory cases of his own, but drew attention to the fact that removal of the ovaries did not always result in the menopause. Badlehner referred to two cases where decided diminution of the tumours occurred after the natural menopause. Müller of Berne had operated in 6 cases, with 1 death and 1 uncompleted operation. In the remaining 4 the result was satisfactory. He regarded castration merely as a resource, and looked on extirpation of the tumour as the ideal operation. Hegar remarked that he had seen fibroids suddenly begin to grow and become cystic after the natural menopause, even in cases where there had occurred some shrinking, just as had been mentioned in the discussion as having followed the anticipated menopause. In all those cases the tumours had been very large, and he would therefore regard the prognosis of castration for very large tumours as doubtful.

EXTRA-UTERINE PREGNANCY — LAPAROTOMY IN THE EIGHTH MONTH — RECOVERY (Brendell, Montevideo, *Ibid.*, No. 41).—A diagnosis of irreducible retroversion of the gravid uterus having been made in the case of a woman who had long suffered from pelvic inflammatory attacks, and who was supposed to be about six months pregnant, abdominal section was performed for the purpose of emptying the uterus and saving the patient's life, which was threatened from collapse. The uterus was found to be empty, and to be about twice its usual size. Behind it there was a tumour occupying the pelvis and lower part of the abdomen, and separated from the rest of the cavity by a diaphragm of fibrous material. On cutting through this there was found a well-formed, dead, and slightly macerated child, which, with its placenta, which was loose, was removed. There was only slight hæmorrhage. A counter-opening was made into the vagina, and a drainage-tube carried through it. The writer expresses his opinion that the case was one of tubal pregnancy, which had progressed without causing rupture of the tube.

CASE OF EXTREME HYSTERIA CURED BY CASTRATION (Heilbrun, *Centralblatt für Gynäkologie,* No. 38, 1883).—The patient was aged 24 and unmarried. Menstruation commenced at 15, and was long and painful. From the age of 17 till the time of operation she was entirely confined to bed, and presented numerous and marked hysterical symptoms, contractures, etc. On vaginal examination the right ovary could not be felt; the left was of the size of a walnut, and very elastic to the touch. Otherwise there was no abnormality in the pelvis. On removal, the right ovary was found to be greatly diminished in size, firm, and irregular in shape; while the left one was large, had an uneven surface, and contained numerous small cysts. No microscopic examination was made. Immediately after the operation the sickness ceased, and in a short time all hysterical symptoms disappeared, and the girl was able to leave her bed.

CASE OF OVARIOTOMY, WHERE THE PATIENT SUFFERED FROM HYSTERICAL HEMIANÆSTHESIA (Landau and Remak, *Zeitschrift f. Klin. Med.*, vi. 5).—In this case the hemianæsthesia and the diseased ovary (a dermoid cyst) were both on the same side; but after operation there was not the slightest improvement in the hysterical manifestations.

A METHOD OF INTRAUTERINE TREATMENT (Bandl, *Centbl. f. Gynäk.*, No. 43, p. 691).—Bandl describes the following method to be employed when curetting or such like operations are undertaken, and recommends it because, while it can be carried out single-handed, the advantages of antiseptic precautions are obtained. With the patient in the lithotomy position, a Fergusson's speculum is introduced, and the anterior lip of the cervix secured by means of a hook or volsellum. The speculum is then partly withdrawn, and the uterus pulled down; or, better, a shorter and larger speculum is passed over the top of the one already used, which latter is then entirely withdrawn. This short speculum, into the end of which the uterus is firmly drawn, is then filled with 5 per cent. carbolic solution, and the curette or other instrument is used through the fluid. No pain is caused by such a proceeding. For the treatment of cervical or body catarrh he employs a similar procedure, substituting for the carbolic acid a 10 per cent. solution of sulphate of copper, and instead of the curette using a perforated silver cannula, which is introduced into the uterus and slowly moved about, thus allowing the solution to come in contact with all the interior surface of the uterus.

PYO- AND HÆMATO-SALPYNX—OPERATION—CURE (Zeiss, *Ibid.*, No. 47).—A patient, aged 47, had suffered from very painful menstruation ever since her thirteenth year. At the age of 22 she had had a still-born seven-month child. Between the ages of 40 and 44 she had been married, and during this time her menstrual pain had been greatly aggravated. She had been treated very variously on several occasions: once for hæmatocele, once by amputation of the vaginal portion of the cervix, and once by hypodermic injections of ergotine on account of a small fibroid in the fundus. When Zeiss examined her under chloroform he recognised this fibroid, and diagnosed swollen, inflamed, and apparently cystic ovaries, with adhesions on the left side. On account of the enormous suffering and profuse bleeding he advised castration, notwithstanding the patient's advanced age. At the operation he easily removed the uterine appendages on the right side, but on the left side experienced great difficulty, on account of numerous adhesions. Ligatures close to the upper angles of the uterus were employed, and the masses cut away with the thermo-cautery. Fluid contents escaped from both—purulent on the right, bloody on the left. The after progress of the patient was slow; but ultimately she recovered, and did not suffer either from pain or hæmorrhage. An examination of the removed structures showed that on the right side to consist of the dilated tube closed at the outer end, and with all traces of fimbriæ gone. Closely adherent to its concavity was the ovary, little altered in size. That of the left side consisted apparently of tube alone, dilated into the semblance of a sausage, and no ovary could be detected. As menstruation ceased after the operation, Zeiss suggests that either the left ovary was completely destroyed, or that the tubes dominate menstruation, as held by Lawson Tait.

CLINICAL LECTURE ON FAILURE OF SEXUAL DEVELOPMENT (T. Gaillard Thomas, *Boston Med. and Surg. Journ.*, Oct. 4, 1883).—The case presented was a Polish Jewess, "physically a girl of 12, but chronologically a young woman of 18," who had never menstruated, and who had "an infantile, undeveloped uterus, with probably the same condition of the ovaries." In regard to the prognosis in such cases, the writer recommends that an attempt be made to spur on nature to carry on the development, which, for some reason, she has hitherto neglected; but "if, at the end of three months of persevering and systematic effort, no progress had been made, I should then think it useless to go on with any further treatment." The writer's plan of treatment in such cases is as follows:—"I begin by inserting into the uterine canal a very small sea-tangle tent, which I keep in position by tamponing the vagina. This is to be removed in twenty-four hours, and in two or three days a slightly larger tent is put in. After a time two or three small tents may be used together, and in this way we can really make the uterus grow by producing an afflux of blood to the organ. It is, to be sure, a very clumsy way of accomplishing this; but as it is the only way that I know of, I am content to practise it. As time goes on we can use larger tents; and if we really succeed in increasing the size of the uterus somewhat, a glass stem should be introduced into the cavity and supported by a cup pessary. This stem should be worn both day and night, but should be taken out once in every three or four days. At the same time means should be directed to the improvement of the general system. Highly nutritious food is of the first importance, and the patient should have not three, but six, meals a day." Along with this he employs Turkish baths and massage; and should he by such means succeed in decidedly improving the general health, recourse is had to stimulation of uterus and ovaries by electricity,—one electrode applied to the cervix and ovaries in succession, and the other to the nape of the neck and down the spine. Frequently, after three months of such treatment, an erratic hæmorrhage from the uterus occurs. In such an event monthly galvanic stimulation of the uterus—with an intrauterine electrode—and of the ovaries is carried out. In conclusion the writer records his experience of a gratifying number of successes in similar cases.

NON-PUERPERAL PELVIC LYMPHADENITIS AND LYMPHANGITIS (Paul J. Mundé, *American Journ. of Obst. etc.*, Oct. 1883).—The writer of this paper seeks to differentiate from among cases of pelvic cellulitis a class of cases where—usually as a result of some peripheral irritation—there is an inflammatory condition of the lymphatic structures in the parametrium, with nodular swelling of glands, and "an exceedingly tender, hot, and puffy parametrium, without any distinct plastic effusion or general elevation of temperature." He summarizes the points drawn attention to in his paper thus:—1. That an inflammation of the pelvic lymphatic glands and vessels occurs in the non-puerperal state far more frequently than is generally supposed. 2. That such inflammation generally becomes chronic, and very closely simulates so-called "pelvic cellulitis and peritonitis," both in its symptoms and physical properties. 3. That such lymphatics in a state of chronic inflammation possess certain characteristic features which permit their recognition by the examining finger, and that this inflammation may either depend on and be secondary to uterine disease, or be entirely confined to the lymphatics and be apparently idiopathic. 5. That the treatment resembles that of chronic pelvic inflammation, with one exception,—the primary necessity for the removal of the focus of irritation, if such exist, before the lymphatic inflammation can be permanently relieved.

SURGICAL PERISCOPE.

By A. G. Miller, F.R.C.S.E., and J. Maxwell Ross, M.A., F.R.C.S.E.

Surgical Treatment of Masturbation.—Dr Timothy Haynes of Concord, N.H., recommends that in hopeless cases of masturbation and nocturnal emissions a part of each spermatic duct should be removed. This can readily be effected by a small incision midway between the external inguinal ring and testis. He considers such an operation preferable to castration, and gives notes of three cases in which it appears to have done good.—*Boston Med. and Surg. Journal,* 9th August 1883.

Epithelioma originating in Abscess of the Lachrymal Sac.—Dr D. Webster of the New York Polyclinic reports the case of a Connecticut farmer who had lachrymal abscess followed by stillicidium at the age of 45. He neglected this condition of the eye for sixteen years, when he put himself under the care of Drs Webster and Agnew. There was a tumour of the size of a Lima bean over the tear-sac, and on its surface was an ulcer covered with a scab. Pus could be squeezed from the lachrymal sac. The eyeball was red, and there was some superficial vascular keratitis. There was no pain in or about the tumour, but "a little trifling itching." As epithelioma was suspected, Dr Agnew removed the growth, and gave it to a microscopist, who, after examination, gave it as his opinion that it was an epithelial carcinoma of the small-celled variety. The lower canaliculus was afterwards slit, and probes passed into the nose. Some months later two nodules appeared at the seat of the operation, but the patient declined further interference with the knife. He, however, submitted, a year or two after, to have a cancer-paste put on by a cancer-doctor. The operation extended through some weeks and was very painful, but the tumour was effectually destroyed. The site healed, leaving a deep depression, and the growth never returned, the patient dying two or three years later of typhoid pneumonia.—*New York Med. Record,* 6th October 1883.

Extirpation of Goitre.—Prof. Julliard of Geneva has an instructive article on this subject in the *Revue de Chirurgie* of 10th Août 1883, based on his observations of thirty-one cases in which he performed complete or partial removal of diseased thyroid glands. He does not approve of anæsthetics being given for the operation, because of the danger of suffocation to which the patient is exposed, the trachea being pulled about considerably during the manipulation of the gland, and also because of the risk of after-sickness, when the movements of the œsophagus communicated to the trachea would take all chance of rest from the wound. Should the patient insist on having an anæsthetic, he gives chloroform in preference to ether, but only to such an extent as to admit of the incision being made through the skin. The remainder of the operation is done without the anæsthetic. The incision recommended is the linear one in the middle line of the neck, which he finds gives him sufficient room, without necessitating a cross-section of the muscles lying in front of the goitre. The capsule being incised, the bistoury is laid aside. The fingers easily separate the gland from its capsule, except where there may be adhesions. These are carefully divided with blunt-pointed scissors between double ligatures, which should be of catgut. It is absolutely necessary that no adhesion should be cut before ligatures have been applied, if the two great risks of hæmorrhage and entrance of air into a vein are to be avoided. The capsule is left in the wound. Sometimes it is absent, and there is then great danger of parenchymatous hæmorrhage, while extirpation is rendered more difficult. After the gland has been removed, the wound should not be washed out, as this procedure tends to cause more abundant oozing, and also to irritate the pneumogastric and recurrent laryngeal nerves. The cavity should, however, be gently swabbed out with sponges and all clots removed, its toilette being as carefully attended to as that of the peritoneum after an ovariotomy. The necessity for washing out the wound cavity is prevented by the use of the spray during the performance of the operation. Drainage must be carefully attended to, while the dressing ought to fulfil two conditions: it should be antiseptic and compressive. This is best effected by a layer of carbolized sponges put on after the protective all over the front of the neck and chest. Position is of importance in the after-treatment. The head and neck should be raised, to allow the discharge to run off readily. Rest for the wound will be got by enforcing silence and as nearly as possible entire abstinence from food or drink. Swallowing is usually performed with difficulty and with risks of tracheal disturbance for the first few days. It is dangerous in those who suffer from aphonia, as the larynx is paralyzed, and pneumonia (*par aspiration*) might be set up. It usually returns to the normal about the fourth or fifth day. Of the thirty-one cases, five died,—two on the table, one of embolism, another of pneumonia, and the fifth probably of cardiac and pulmonary lesions due to paralysis of the pneumogastrics. In this case the autopsy revealed no distinct lesions to which death could be attributed, but the right recurrent laryngeal nerve was found to have been cut, the left included in a ligature, and the pneumogastrics intact but surrounded by a sanguineous effusion. Of the twenty-six recoveries all healed by first intention, with the exception that in one or two cases a purulent discharge came from the lower part of the wound—the retro-sternal pouch. Aphonia was observed five times after the operation. In one case the autopsy showed that this was due to section of the recurrent laryngeals. In another case that died of pneumonia these nerves were found intact, while in the remaining cases the aphonia disappeared. Secondary alterations of the voice were observed in three cases. These were probably due to the recurrent laryngeals having been caught in the cicatrix. Extirpation of the goitre had no effect in improving the voice where changes had occurred before the performance of the operation. Among later accidents, in two of the cases, symptoms of profound anæmia, with swelling of the limbs, pallor of the integuments, and extreme feebleness and disinclination to exertion, were observed. In addition, in one of the patients, a lad of 17, the temperament was changed and his growth arrested. Similar changes have been observed by Borel of Neutchatel and by Reverdin. Borel is inclined to attribute some of them to disturbances of the cerebral circulation occasioned by the number of ligatures rendered necessary. Julliard is rather of opinion that they are due to the operation itself. They occur only in those cases where the entire gland is removed, and where, in consequence, some of its unknown functions may be suppressed. [In this he agrees with Professor Kocher of Berne, who recently described these after-results of extirpation under the name of *cachexia strumipriva*, a disease or condition which, as was shown in the debate on Dr Drewitt's case at the meeting of the London Clinical Society of 23rd Nov. 1883, has many close and striking resemblances to myxœdema. So much was this the case, that when Kocher was made aware of the resemblances between them, he wrote to Dr Ord, saying that there could not be "the slightest doubt of the analogy of myxœdema and cachexia strumipriva." Moreover, in the former disease atrophy of the thyroid body is an important symptom, and thus it is probable that a new and important light has been thrown on its ætiology.] The author then passes on to consider in what cases goitres should be removed, and comes to the conclusion that where they embarrass the respiration and do not readily succumb to the application of iodine it is best to remove them. Extirpation should be partial if possible, otherwise complete. The operation should be performed early rather than late. Goitres that are only disfigurements should not be removed except they are very voluminous and prominent and a partial extirpation can be done. In the case of cysts of the thyroid body he prefers extirpation (of the cysts themselves) to the iodine injection or the antiseptic incision. These latter modes of treatment may do for simple unilocular cysts with thin walls and a serous fluid, but for hæmorrhagic or multilocular cysts with thick, tortuous walls and contents that are not serous, extirpation is necessary.

PLASTIC OPERATION ON THE FACE FOR REMOVAL OF EPITHELIOMA OF THE LEFT CHEEK.—Dr Post of New York reports the following case in the *Illustrated Journal of Medicine and Surgery* (New York):—The patient (aged 61) suffered from an irregularly circular epithelioma of the left cheek, extending close up to the eye and down to the level of the angle of the mouth. The ulcerated surface was removed by four incisions placed at right angles to each other. The two side incisions were extended down to the base of the jaw, and then curved backwards on the neck, the anterior one lower down than the other. By this means a long flap of integument and cellular tissue, with the upper end rectangular, and attached below with a pedicle to the tissues of the neck, was free to be displaced upwards and occupy the gap left by the removal of the ulcer. In the course of the operation "the angular, labial, and transverse facial arteries were divided and secured by ligatures." But before attaching the flap by sutures in its new situation, "the ligatures were jerked off from the ends of the divided vessels, and there was no hæmorrhage at the time of their removal." Ectropion resulted from the union and contraction of the flap derived as above described. To remedy this Dr Post dissected up the lower eyelid from the transplanted flap, and turned down another flap from the temporal region, part of which sloughed. The ultimate result is not reported, because "the patient was allowed to go out on a pass, but did not return." The condition of the patient before and after the first operation is represented by two beautiful coloured plates. The lines of incision in the operation are represented on two woodcuts. The second operation was performed six weeks after the first.

FRACTURE OF THE LOWER JAW.—Dr J. S. Wright of Long Island College Hospital, America, recommends a method of treatment of which the principal part is a *six-tailed* bandage. The centre is placed on the chin; three tails are on each side of the head. The two posterior on either side are brought upwards, the two anterior backwards, and the two middle ones carried to the vertex of the head. Instead of being tied, the ends are passed through slits made in a square piece of wire gauze which is placed on the top of the head. A four-tailed splint for the jaw is made of the wire gauze, and put on in the ordinary manner.—*Illustrated Medicine and Surgery*, July 1883.

TREPHINING FOR TRAUMATIC RUPTURE OF THE MIDDLE MENINGEAL ARTERY.—"Krönlein reports two cases. The first case, seen on the day after the injury, was in a profound stupor; no paralysis; pulse 58. Subsequently there was incomplete paralysis of the right leg, complete paralysis of the right arm, ptosis, and facial paralysis. Hæmorrhagic effusion from rupture of the middle meningeal artery was diagnosticated, and Krönlein performed trepanning on the fourth day, but no extravasation was found. Post-mortem examination showed a large hæmorrhagic effusion, which had escaped from a branch of the middle meningeal, pressing upon the anterior central convolution. The second case, male, æt. 60, had a fall, became unconscious, and passed into a comatose condition. The left side was paralyzed, there was slight facial paralysis, with relaxed sphincters and retarded pulse. There was also conjunctival ecchymosis of the right side, doughy infiltration of the skin and soft parts of the temporal region, and pressure in that region seemed to be painful. Krönlein diagnosticated fracture, with rupture of the middle meningeal artery. The patient was trephined, and an extravasation found, there being also a depressed fracture pressing on the brain. A very large amount of coagula was removed. Two months after the operation the patient was well, with the exception of slight paralysis of the face (mouth)."—*Philadelphia Medical News*, 11th August 1883.

PERISCOPE OF STATE MEDICINE.

By James Allan Gray, M.A., M.D. Edin., F.R.C.P.E.

The Influence of the Salts of Lead on the Detection of Phosphorus by Mitscherlich's Process.—Otto, in his treatise on poisons, cites the opinion of Schwanert that the presence of salts of lead prevents the appearance of phosphorescence in Mitscherlich's apparatus. M. H. Beckurts, in order to put this opinion to proof, undertook certain experiments with bread, meat, etc., to which had been added the ends of phosphorus-matches, and also several of the salts of lead. Distillation of these together showed that the presence of a lead salt effected no hindrance to the appearance of the phosphorescence, and further proved that phosphorus is very readily detected by this method.—*Archiv de Pharmacie*, 1883, p. 582, quoted in *Journal de Pharmacie et de Chimie*, November 1883, p. 449.

Fatal Poisoning with Chlorate of Potash.—Bohn, in the *Deutsche Med. Wochenschr.*, 1883, No. 33, relates a case of this kind which occurred in the person of a man 49 years of age, who was ordered the drug for gonorrhœal cystitis. Bohn told the patient to dissolve a teaspoonful of the chlorate of potash in a glass of water, and to take an eggspoonful of the solution every two hours; but instead of this the man, at the times indicated, took by mistake a teaspoonful of the salt itself in a glass of water,—in all about 60 grammes (over 2 ounces) in 36 hours. The symptoms of poisoning were vomiting, great pain in the stomach, much tenderness on pressure over the bladder, pale face, cold hands, small, swift pulse, oppressed respiration, hoarse voice, formication in the hands and feet, dirty grayish-white coated tongue; and later, warm, moist hands, elevation of rectal temperature to 38° R. (= 107°·5 F.), and strongly-marked icterus. Consciousness was not interfered with until shortly before death, which happened on the second day. The urine was scanty in quantity and dark-red in colour; it contained small brownish granules and tubes, a few unaltered blood-discs, and gave the absorption band of methœmo-globin.—*Central. f. d. Medicin. Wissensch.*, November 10, 1883, p. 827.

POISONING BY IODOFORM.—Warfvinge (*Hygiea*, xlv. 2; *Svenska läkaresällsk. förh.*, S. 12, 1882) notes a case of poisoning by iodoform during the local application of the drug to gangrenous sores of the pudenda. The case occurred in the person of a female patient suffering from typhoid. During the course of the fever an injection containing carbolic acid was given daily; but this was stopped, and the iodoform applied in 1 to 2 gramme doses morning and evening. The urine never showed any colouring from carbolic acid. The sores improved under the treatment; but on the third day of the employment of the iodoform the temperature rose to 40° and 40°·4 (104° F. and 104°·7 F.), and this without the occurrence of any complication. The patient was pale, restless, and somewhat collapsed. On the following day the temperature fell, but the condition otherwise remained unchanged. On the fifth day the patient complained of dizziness, was very restless, delirious, and desirous of getting out of bed; no lung or heart ailment could be discovered, but the urine, which was non-albuminous, gave the reaction for iodine. On the iodoform being discontinued, improvement commenced at once, and the sores healed without further medication. —*Schmidt's Jahrbücher*, 1883, No. 4, p. 27.

POISONING BY CYANIDE OF POTASSIUM.—An instance of the carelessness of workpeople in the use of poisonous drugs is given by Dr G. B. Knös in the *Eira*, vii. 4, 1883. A girl employed in a goldsmith's establishment had occasion to clean a battery used for electrolysing metals, and in order to empty the vessel which contained the solution used for coppering, she poured the contents into a glass from which the workmen were accustomed to drink, without informing them that she had done so. The solution consisted of a pound of sulphate of copper and a pound of cyanide of potassium in a quart of water; and of this a lad, 16 years old, took a mouthful—the taste restraining him from further libation. In a short time he was giddy, and had fallen down faint. Emetics were given; and when Knös saw him, which was about half an hour after taking the poison, he had by that time vomited repeatedly, and the vomiting continued for an hour. The matters first expelled smelt strongly of hydrocyanic acid. No severe circulatory or respiratory symptoms showed themselves; but the patient had cold sweats and severe shivering, and complained of headache and debility, which latter symptoms continued until next day. On the eighth day he was able to resume work. In explaining the absence of severe symptoms of poisoning in this case, Dr Knös remarks that the salts were not in complete solution (lumps of them being found undissolved in the fluid), and that the sulphate of copper, being more readily soluble, would be in excess in the fluid in the first instance, and so would decompose the cyanide of potassium and form an insoluble cyanate of copper. Later, when the cyanide of potassium appeared in excess in the fluid, it would redissolve the cyanate of copper, and the solution would consequently become then more strongly poisonous.—*Schmidt's Jahrbücher*, 1883, No. 4, p. 27.

Note.—The fatal dose of cyanide of potassium has varied greatly. Several cases are on record of death from 5 grains, while, on the other hand, recovery has taken place from large doses. One unique case is mentioned in Taylor's *Medical Jurisprudence*, where a man, after dissolving an ounce of the commercial cyanide of potassium, and, with suicidal purpose, drinking the greater part of the solution, was rescued by timely treatment. In Dr Knös's case probably as much was due to the presence of sulphate of copper in the solution taken, and to the consequent rapid emesis, as to any other consideration, beyond the fact that all the cyanide of potassium was not in solution.

STRYCHNIA *v.* PTOMAÏNES.—Garnier lately read a paper before the Society of Medicine of Nancy on the points to be noted between strychnia and the cadaveric alkaloids. In this paper he showed how he had met the contention urged on the prisoner's behalf in a recent case of poisoning by strychnia, that he (Garnier) and Schlagdenhauffen had mistaken ptomaïnes for strychnia. These experts recovered from the stomach of the deceased a definitely crystalline substance, the crystals of which were identical in appearance with those of strychnia. The crystalline characters of the ptomaïnes, on the other hand, have not been defined, if indeed these bodies be crystalline at all when free. Then the quantity of crystalline material obtained from the stomach was much too great to have any connexion with a cadaveric alkaloid developed in eight days in a body interred. Further, the extract gave the characteristic chemical reaction of strychnia,—a violet-blue coloration in the presence of sulphuric acid and bichromate of potash, while the ptomaïnes in the same conditions give brown, brownish yellow, or green colours. And lastly, the extract from the body of the victim gave the physiological reactions of strychnia. —*Revue des Sciences Médicales*, 1883, No. 44, p. 492.

RAPID DEATH FROM ARSENICAL POISONING.—A man, aged 51, swallowed by mistake a mixture believed to consist chiefly of glycerine, but which really contained arsenious acid in quantity.

The symptoms were faintness, collapse, and slight epigastric pain without vomiting, cold skin, face bedewed with clammy sweat, pulse slow and very feeble, respiration shallow, and pupils moderately dilated but acting to light. The patient had headache, but was quite conscious, and kept spitting to clear his mouth of viscid mucus. An emetic did not act, so the stomach-pump was used, and the stomach well washed out. Brandy was given, and the patient put to bed and warmth applied; but he sank rapidly, and died an hour after taking the poison. The post-mortem showed nothing definite; but analysis detected arsenious acid in the contents of the stomach, in the tissues of the body, and in the small quantity of fluid left in the bottle from which the poison had been taken. A quantitative examination of this latter showed that the patient had swallowed about twenty-six grains of arsenious acid. In commenting on the above, Dr D. W. Finlay, who reports the case, calls attention to the rapidity of the fatal issue, and states that he is aware of only one instance in which a more rapidly fatal result ensued, and that in that case the symptoms were of a tetanic character. The large dose, its complete solution, and the empty condition of stomach, favoured rapid absorption and speedy death, and accounted for the presence of collapse and the absence of gastric symptoms. Such a case as the above lends confirmation to the view of M. Vryens (*Archives de Physiologie*, vol. viii., 1881), "that the fundamental character of arsenical poisoning consists in a perversion of the entire nervous system; and that the pneumogastric, sympathetic, and vaso-motor nerves especially are paralysed, or reduced to a state of paresis."—*Lancet*, December 1, 1883, p. 943.

Part Fifth.

MEDICAL NEWS.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination for the qualification in Medicine at the sittings held on 5th December 1883, and were admitted L.R.C.P. Ed.:—Allan Heslop Jackson, London; Alfred Bailey Liptrot, Wigan Infirmary; George Herbert Williams, Warrington; Michael Francis Kenna, Lincoln.

Dr J. Halliday Croom has been appointed Assistant to the Gynecological Department of the Royal Infirmary, Edinburgh.

Her Majesty the Queen has been pleased to confer baronetcies upon William Bowman, F.R.S., and Joseph Lister, D.C.L.

St John Ambulance Association. — A horse ambulance carriage has just been presented to the association by a member of the committee. This vehicle was designed by Mr John Furley, deputy-chairman. It will carry three patients on stretchers, and two persons seated, as well as two on the box. The mode of putting the stretchers into the carriage is entirely novel. It is constructed of English and American ash, with a roof of the best pine, the wheels being of English oak and ash. It has sliding plate-glass windows, framed in mahogany and set in borders of walnut wood. The fittings are very complete, and include a small chest for hospital comforts. This carriage is intended for use in the streets of London.

British and American Diplomas, etc.—"A matter of the greatest interest to the inhabitants of these colonies is the comparative value of the diplomas granted by licensing bodies in the United Kingdom and by those in the United States. In the former, no man can obtain a qualification to practise medicine or surgery until he produces proof that he has diligently studied under properly recognised conditions for at least four years. Many of the degrees require a much longer period, but this is the minimum. In the United States it is very different. The highest qualification obtainable there—which we believe to be that of the Bellevue Medical College of New York—only necessitates a course of three years' study, whilst many others barely require as many months. Many, indeed, require no residence at all, and some even—as the Bellevue Medical College of Boston—not even personal examination, the whole thing being conducted by correspondence, the diploma being forwarded by post or otherwise." The above is from an "editorial" in the *Australasian Medical Gazette* for June 1883. It seems to us that when our examining bodies are being brought to task at present for their methods of granting degrees, it is high time that America was looking to its colleges and diplomas. Americans are very much against free trade in some things; it seems a pity they don't put some restriction on the trade in diplomas.

Food-supply and its Dangers.—The *Australasian Medical Gazette*, in a leading article, refers to the dangers to consumers from diseased cows' milk being used. It demands the appointment of a dairy inspector, with powers especially to interdict the sale of milk from diseased or suspected cows. We think attention should be directed, also, to the risks from the iron cow and drains. We would like to see a special inspector of dairies and of milk supply in this city who had a competent knowledge of animals, drains, and water supply.

Dr Morse Stewart, writing in the *Detroit Lancet* for March 1883 on the subject of the treatment of syphilis, strongly advocates a mild but continued employment of mercury. He prescribes blue pill gr. j., or biniodide of mercury gr. $\frac{1}{16}$, three times a day till a slight constitutional effect is produced, when the drug is omitted for a week or ten days. Cases are quoted showing the contrast between cases thus treated and those under the expectant method, the former showing better results.

In the New York *Annals of Anatomy and Surgery* for May 1883 is an able article by Dr Mastin of Mobile on "Chylocele." By this term is understood a collection of chylous or lymphous fluid in the tunica vaginalis. From careful chemical and microscopic examination of the fluid it has been proved to be identical with the contents of the lymphatics. From a careful dissection during operation for radical cure in two cases, it has been shown that the source of this fluid was an open vessel, not a bloodvessel, but identical with a lymphatic. The cause of the affection is supposed to be an injury or blocking up of a lymphatic in connexion with an inflammatory process, gonorrhœal or otherwise, leading to rupture of the vessel and extravasation of its contents into the tunica vaginalis. The symptoms are similar to those of hydrocele, except that there is no translucency, and the contents of the sac are milky in appearance instead of clear. Injection of iodine after tapping was found to be of no use in preventing recurrence. A cure was effected by freely opening the sac, finding the open orifice, and ligaturing it. According to Dr Mastin, there have been only five cases recorded, including his own.

IRREVERENCE AND QUACK ADVERTISEMENTS IN RELIGIOUS JOURNALS.

[THIS excellent article we extract entire from the *American Medical Record,* which is most ably edited by Dr George F. Shrady. The irreverence and quackery so well described are just as frequent in this country as in America.—Ed. *E. M. J.*]

Our religious contemporaries, with a few conscientious and commendable exceptions, still persist in their old policy regarding medical advertisements. Indeed, they are adroitly expanding this peculiar line of industry, so as to include the balder and grosser swindling schemes, which promise the guileless reader a phenomenal return on an infinitesimal investment. They should certainly be congratulated on the enterprise which enables them to present in a single copy such multifarious opportunities for the subscriber to refresh his mind, body, and estate. How the editors of these journals have rendered their consciences as elastic as their advertising columns must remain a matter of conjecture.

They can no longer plead ignorance as an excuse, for the expressed opinion of the medical press and the medical profession has been so decided and unanimous, that these gentlemen must know that, as far as the medical nostrums they advertise are concerned, many of them are for disgustingly immoral purposes, and all of them are swindles of the most despicable and pernicious kind. If these gentlemen claim that the papers would not pay without this class of advertisements, they are simply serving "Mammon" for the glory of God. It would be interesting to know to which of the two masters they are more devoted. Most educated people are willing to accord them the benefit of the doubt; but there may very likely be some unsophisticated individuals of a more or less heathen persuasion who would be quite at a loss to decide whether the salvation, whose joyful sound these journals proclaim, is to be considered from a religious or medical point of view. Well may these benighted "innocents" inquire of our editorial Fergusons, "Which is the bust, and which is the pedestal?" What a comfortably adjustable conscience that must be which will not allow a church fair to swell its assets by raffles and dancing, yet permits a journal to increase its income by a more palpable species of immorality. This peculiar kind of piety cannot help but remind us of the familiar anecdote of the grocer deacon and his clerks, which we might appropriately paraphrase to suit the times, and imagine our clerical *confrères* making their rounds through the composing-room somewhat as follows:—

"Well, Thomas, have you finished 'Yours for Health?'" "Yes, sir."

"And you, Richard, have you set up the Great Indian Secret for the Afflicted?" "Yes, sir."

"Henry, have you completed that Blood Purifier?"

"Yes, sir."

"*Then let us have prayers.*"

A short time ago there appeared in one of these medico-religious sheets a report of a prayer-meeting at which the editor was present. In the course of the meeting a young man stated that he had lost his situation because he would not mark goods above their real value. He would not have to sell them, he must merely label them. He preferred to avoid an appearance of evil, and so, though he could ill afford it, resigned. Our brother's remarks thereon were fairly redolent with adulation. Their gist was, "Well done. Take no thought for the future, for the Lord will provide." Ah, friend, you may not label goods falsely, but you advertise them, knowing their labels to be false. The youth at the prayer-meeting would not allow a mote in his eye. Cast the beam out of thine own eye: the Lord will provide. "But you don't indorse your advertisements?" No, we should hope not. But had your young friend said to his worldly employer, "I cannot mark your goods falsely, but if you will label them and give me some printed price lists, I will go on the street and hold a gospel meeting and distribute your lists with my tracts. I will not indorse your cheat, but I will advertise it," would you not have shattered his sophistry, and condemned this act as much as you lauded the other? Alas, sirs, "your actions do belie your words."

Now, brethren, let us follow out your policy a little further. We will suppose, with all reverence, that Christ had delayed his coming until the present century. Would you not deem it a most painful incongruity to see the Epistles of Paul interlarded with patent medicine advertisements? Is not the dignity and responsibility of your trust essentially the same as his? Would you not recoil with horror at the idea of beholding the tablet erected reverently for the loved ones you had lost defiled with the fulsome bait of the sharper and abortionist? Yet, because the tablet takes the form of an obituary notice—a tribute less lasting, perhaps, but surely as tenderly sacred to the bereaved—why is such an insult any less heartless or apparent?

If you are convinced you are justified in allowing these advertisements to appear in your columns, why do you not urge the universal application of your rule of conduct? Any patent medicine firm would print your whole paper if they could monopolize the advertising space. But why stop here? Let all the printing of the Church be done by these firms. If it is right and proper that Sunday-school lessons, hymns, sermons, the Scriptures themselves, should appear in your columns besprinkled with pile remedies and vermifuges, why not everywhere? It is perfectly practicable; try it. Think of the increased usefulness of your Boards of Publication, had they only to furnish the copy and not the cash, to the printer! Some people with antiquated notions might feel a little squeamish about using a Hair Restorer Hymnal or a Kidney Cure Testament in their devotions, but your prayers are rapidly eradicating such old-fashioned ideas of propriety. Advise your poorly paid ministers to free themselves and their church from debt by alternating the "usual notices" with extracts from your papers at so much per extract. They would merely proclaim from the pulpit what you give as Sunday reading at home.

Now, you may declare yourselves shocked, and term all this an irreverent tirade, if you please. The irreverence is yours, not ours. Your family physician may tell you of a shock from another quarter. We believe there are few men but what revere, or at least respect, religion, pure and undefiled; but any attempt to spread simultaneously the work of the gospel and the work of the world, the flesh, and the devil, can only excite disgust. Can a journal, any more than a "temple," become in any sense a "house of prayer" while its outer court is but a "den of thieves?" Has the progress of the age permeated the Pilgrim's Progress of to-day, or have you forgotten the simple story of the "Prince of Dreamers?" We wonder what honest John Bunyan would think of the manner in which these modern pilgrims pass through Vanity Fair on their way to the Celestial City? Our old friends, Christian and Faithful, when besought by the merchants to buy their wares, put their fingers in their ears, and raised their eyes aloft, crying, "Turn away mine eyes from beholding vanity!" Our esteemed contemporary pilgrims, whilst zealously saying, "We will have none of your wares," add, "We have been told your wares are evil and cannot indorse them, but give us of thy lucre, and we will advertise them." Would there were more John Bunyans alive to-day!

Part First.

ORIGINAL COMMUNICATIONS.

I.—THE DIAGNOSTIC AND PROGNOSTIC VALUE OF THE TUBERCLE BACILLUS.

By G. Hunter Mackenzie, M.D., Surgeon for Throat Diseases to the Eye, Ear, and Throat Hospital and Dispensary, and to the Western Dispensary, Edinburgh.

If the presence of tubercle bacilli can be recognised as affording a constant indication of the tuberculous process, and if we can at least approximately gauge by their number and their arrangement the measure and progress of the disease, their diagnostic and prognostic value will necessarily be secondary only to their etiological worth. The presence or absence of the bacilli in the sputum will thus become a valuable adjuvant to the ordinary methods of physical examination, especially in doubtful cases, such as those of incipient disease, in which physical examination is frequently to a certain extent unsatisfactory in its results. From such considerations it is evident that the specific organisms of tubercle demand careful study from a diagnostic and prognostic no less than from an etiological point of view, and it is from this aspect only that the present contribution is made.

Since Koch's famous discovery of the tubercle bacillus, now nearly two years ago, several competent observers have placed on record their views in regard to its value in diagnosis, whilst others have attempted to estimate its prognostic worth, basing their estimates chiefly upon the numbers, arrangement, and activity of the bacilli. The essence of Koch's works consists in this, that in phthisis he has discovered and isolated a rod-shaped body, varying in length, but whose average size is about one-half the diameter of a red blood-corpuscle, and by the inoculation of this organism after cultivation he has produced tuberculous disease in animals. He believes this organism to be pathognomonic of tuberculous disease. Balmer and Frantzel abroad, and Watson Cheyne, Heron, Gibbes, Ransome, Dreschfeld, and Williams in this country, have by their independent researches confirmed his views, whilst Spina, Guttman, Schmidt, and several other Continental and American writers have openly contradicted them. The evidence adduced is, without the slightest doubt, entirely in favour of Koch.

Whilst the diagnostic value of the tubercle bacillus is thus widely accepted, its prognostic worth appears to be to a much greater extent a question of speculation and doubt. Dreschfeld, Williams, and D'Espine consider it of little prognostic value, whilst Heron, West, and Chiari consider it more or less valuable in this respect. The points in regard to prognosis upon which stress has hitherto been laid are:—(1.) The number of the bacilli; (2.) Their arrangement; and (3.) Their activity as regards multiplication. If the bacilli be numerous, massed together in bundles or "fagots," and if they show by a well-marked beaded appearance a readiness to divide and multiply, the prognosis is considered more unfavourable than where these organisms are few and isolated, and where they bear little appearance of division, for in the former case they are reported to indicate a more acute, in the latter a more chronic (fibroid) form of disease.

In the present paper, a first communication on the subject, the main questions with which it has been attempted to deal are:—(1.) Is the bacillus of tubercle found in the sputum during the course of tuberculous disease only? (2.) If so, have tubercle bacilli a prognostic as well as a diagnostic value, and what are the conditions which determine their numbers and their arrangement?

The conclusions set forth in this paper are the result of 125 examinations in 70 cases of disease, embracing, through the kindness of many medical friends, examples of phthisis, empyema, chronic bronchitis, whooping-cough, croupous pneumonia, chronic catarrh, pleurisy, broncho-pneumonia, chronic pneumonia, bronchiectasis, pulmonary hæmorrhage, simple laryngitis, tubercular laryngitis, scrofulous disease of glands and bone, and tuberculous testis. In a certain number of these, which are denoted by an asterisk, the nature of the case from which the specimen of sputum submitted for examination was obtained was purposely withheld from the investigator, who was required to decide whether the case was tuberculous or the reverse. The results are now submitted in tabular form, without any arrangement of the cases.

TABLE SHOWING THE RESULTS OF EXAMINATION FOR THE BACILLUS OF TUBERCLE IN 70 CASES OF DISEASE.

No.	Disease.	Age.	Duration of Disease.	Condition of Lungs	Condition of Larynx.	Symptoms.	Expectoration.	Bacilli of Tubercle.	Treatment.	Result and Remarks.
1.	*Doubtful phthisis (?).	26		V. slight comp. dulness at right apex.		P. 86. No fever.	Mucous.	Absent.	Lime.	Cervical abscess afterwards developed. Now well.
2.	*Doubtful phthisis (?).	20		Rough resp. at apices.		Dyspepsia; emaciation; rigors. Pulse 100.	Mucous.	Absent.	Bismuth and hydrocyanic acid.	Recovery.
3.	Chronic phthisis.	42	Several years.	Dulness anteriorly and posteriorly at apices. Coarse crepitation. Slight hæmorrhages.	Ulceration of epiglottis.	Emaciation, etc.	Purulent.	Absent.	Hypophosphites.	Death, one week after examination of sputum, from acute bronchitic attack.
4.	Pulmonary hæmorrhage.	26	Recurrent.	Right apex rough respiration, with occasional coarse crepitation.		Sudden recurrent hæmorrhage. T. normal. P. quiet and rather full.	Bloody. Muco-purulent.	Absent.	Astringents, etc.	Recovery.
5.	Sub-acute phthisis.	9	1½ years.	Dulness and crepitation at right apex. Hæmorrhage.		T. usually normal; sometimes 99°–100° E.	Muco-purulent.	Few at first (2)[1]. Afterwards increasing to (5). In colonies or nests; not in every field at first.	Lime. Antiseptic inhalations. Bournemouth.	Unsatisfactory. Bacilli increased; their increase preceded other symptoms.
6.	Sub-acute phthisis.	22	2 years.	Fine crepitation on coughing — both apices. Bronchitic râles freely over both lungs.	Inflammatory thickening.	P. 104. Rigors.	Muco-purulent.	Fairly abundant (4).	Lime. Antiseptic inhalations.	No improvement.
7.	Acute phthisis.	20	8 ms.	Dulness over upper left lobe anteriorly. Subsequently cavernous breathing.	Phthisis (pyriform swelling of arytenoid cartilages, etc.)	P. 120. T. 99°·6 (2 P.M.)	Bloody. Purulent.	Abundant (6). In clusters, overlying each other.	Antiseptic inhalations. Morphia insufflations.	Death six days after examination of sputum. Autopsy showed bacilli abundant in laryngeal secretion.
8.	Laryngeal phthisis.	50	1 year.	Sl. prolonged exp. at right apex anteriorly, with dry bronchitic click at end of insp.	Appearances of chronic laryngitis.	P. quiet. T. normal (usually). No constitutional disturbance.	Muco-purulent.	Abundant (5). Freely scattered. Seldom in colonies. Found also in laryngeal secretion.	Local astringents to larynx. Spray of carbolic acid. Insufflations of iodoform and morphia.	No improvement. Bacilli persist in spite of all treatment, and disease progresses.
9.	*Doubtful phthisis (?).	20	Few weeks.			Pulse quick. Rigors. No cough.		Absent.		Recovery.

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* Nature of case unknown to investigator.

[1] In the approximate estimate of the number of bacilli an arbitrary scale has been adopted, indicated by the figures 1 to 9 inclusive, thus:—1 to 3 represent few, 4 to 6 abundant, and 7 to 9 very abundant. The figure is given in brackets after the description of the bacilli in each case thus:—Bacilli few (2), bacilli abundant (5), bacilli very abundant (8). 1 would thus represent the mere presence of bacilli, whilst 9 would represent a crowded field. Intermediate conditions would be represented by the other figures.

The method of staining employed has been Gibbes and Heron's modified methods. Gibbes' single stain has been used occasionally, but his double method, with the secondary staining either by chrysoidin or methylene blue, though slower, has been found much more satisfactory. In doubtful cases two different methods were generally used, especially when examinations by the first method yielded negative results.

TABLE SHOWING THE RESULTS OF EXAMINATION FOR THE BACILLUS OF TUBERCLE IN 70 CASES OF DISEASE—*continued.*

No.	Disease.	Age.	Duration of Disease.	Condition of		Symptoms.	Expectoration.	Bacilli of Tubercle.	Treatment.	Result and Remarks.
				Lungs	and Larynx.					
10.	Pulmonary and laryngeal phthisis (subacute).	28	1½ year.	Exp. prolonged, and dry crackling at both apices.	Appearances of chronic inflam. Whispering aphonia.	Pulse 124 E. T. 100°–101°. Night perspirations.	Muco-purulent.	Few (1). Most fields none. In one field 3 or 4.	Lime. Vapour creasote. Zinc locally.	Disappearance of bacilli. Increase in weight.
11.	Acute phthisis.	19	6 ms.	Dulness and cavernous breathing at both apices.		Fever, night-sweats, etc.	Lumpy. Purulent. Abundant.	Abundant (5–6). Mostly in clusters.	Lime. Cold baths.	Death three weeks after examination for bacilli.
12.	Chronic phthisis.	40	1 year.	Sl. impaired percussion at left apex anteriorly.	Inter-arytenoid swelling.	Pulse 92.		Few (1).		Severe hæmorrhage some months afterwards.
13.	Acute laryngeal phthisis.	35	6 ms.	Nothing particular.	Great swelling, hoarseness, dysphagia.	Pulse 96.	Mucous.	Absent.	Sedative inhalations.	Death after childbirth in about two months. (Bacilli also absent from larynx.)
14.	*Doubtful phthisis (?).	20			Slight congestion, hoarseness.	Languor. Loss of weight.	Mucous.	Absent.	Tonics.	Recovery.
15.	*Doubtful laryngitis (?).	21			Slight laryngitis; laryngorrhœa.		Mucous.	Absent.	Astringents to larynx.	Recovery.
16.	Sub-acute pulmonary and laryngeal phthisis.	20	1 year.	Prolonged exp. at both apices, with crepitation.	Fleshy condition of v. cords; laryngitis.	T. 100°. P. 120 (3 P.M.) Rigors; night-sweats. Aphonia; laryngeal dyspnœa.	Scanty. Muco-purulent.	Abundant (4). In clusters; not uniformly through every field.	Lime. Local astringents.	No improvement.
17.	Sl. bronchitis; pleurisy.	50	Few days.				Muco-purulent.	Absent.		Recovery.
18.	Chronic phthisis (quiescent).	23	3 years.	Dryish crackling sounds on coughing at both apices.		Cough. Little expectoration. Hæmorrhage two years previously. P. 110. T. 98°·8 (2 P.M.)	Mucous.	Absent.	Lime.	Continues well.
19.	Acute pulmonary and laryngeal phthisis.	22	9 mos.	Bronchial breathing, and coarse crepitation at left apex.	Typically phthisical.	T. 98·6. P. 104 (noon). Dysphagia; cough; emaciation.	Purulent (profuse).	Few (2). Only seen in two fields. Found also in laryngeal secretion.	Local sedatives.	Death three months after.
20.	Sub-acute phthisis.	34	1 year.		General intra-laryngeal swelling (inflammatory).	T. 101°. P. 110 (6 P.M.) Hoarseness and violent cough.	Muco-purulent.	Few (2). 3–4 bacilli in occasional fields. No bacilli in laryngeal secretion.	Local sedatives.	
21.	Sub-acute phthisis (after bronchitis).	37		Dry scrape at end of inspiration at both infra-clavicular regions. No sign of softening.	Inflammatory intra-laryngeal thickening.	P. 124 (3 P.M.) Dysphagia.	Muco-purulent (morning).	Few (2).	Lime. Local sedatives.	Became worse.
22.	Sub-acute laryngitis.	45	6 ms.		Intra-laryngeal swelling above and below left vocal cord.	T. 98°·6. P. 90 (3 P.M.) Laryngeal dyspnœa. Inspiratory stridor.	Muco-purulent (scanty).	Absent.	Local astringents.	Improved.

23.	Hæmorrhagic phthisis.	48	Several attacks.	Gt. dulness over left lung, with moist sounds.		T. 99°-100° } E. P. 90-100 } Violent hæmorrhages.	Very sanguineous. Muco-purulent.	Few (2). Some fields none; others about 4–6 bacilli.	Astringents. Hæmostatics.	No improvement. Persistence of hæmorrhage.
24.	*Empyema.							Absent.		Death a few days after examination of sputum.
25.	*Sub-acute phthisis.					E. T. 102°–103°. Fever.	Mucous.	Abundant (5).		Worse.
26.	*Acute phthisis.		4 ms.	Tolerably rapid softening.			Muco-purulent. Slightly streaked with blood.	Very abundant (7) Large; some almost spindle-shaped. Scattered uniformly throughout.		Death from hæmoptysis in about one month after examination.
27.	*Acute phthisis.		8 ms.	Softening.		Fever.	Muco-purulent.	Abundant (4).		Died about four months after examination. Exhaustion from diarrhœa.
28.	*Chronic bronchitis mimicking phthisis.						Glairy mucus.	Absent.		Recovery.
29.	*Whooping-cough.						Glairy mucus.	Absent.		Recovery.
30.	Chronic laryngitis resembling phthisis.	43		Expiration prolonged at right apex.	Laryngitis. Marked intra-laryngeal swelling and redness.	P. 100. Some general symptoms of phthisis. Rigors. Night-sweats.	Mainly mucus. Little pus.	Absent.	Local astringents.	Recovery.
31.	*Chronic phthisis.	30	2 years.	Physical signs not well marked. Slightly impaired percussion at right apex. No moist râles.		E. T. 101°. Psoas abscess.	Glairy-mucoid.	Few (3). Tendency to aggregation.		Died one month after examination of sputum, without developing any marked physical signs.
32.	*Croupous pneumonia.	43	10 days.				Muco-purulent.	Absent.		Recovery.
33.	*Chronic bronchitis. Bronchiectasis.			Dulness over base of right lung.		T. 102°. Cough. Pain over right hypochondrium.	Muco-purulent.	Absent.		Became fairly well.
34.	*Acute phthisis.	56	2 ms.	Consolidation of upper part of lung.			Muco-purulent.	Few (2). Some fields no bacilli.	Inhaling creasote and carbolic acid for last 3–4 weeks.	
35.	*Doubtful phthisis (?).						Mucous; sanguineous.	Absent.		Recovery.
36.	*Chronic bronchitis (mimicking phthisis).						Muco-purulent.	Absent.		
37.	Stone-mason's phthisis.	32	6 ms.	No perceptible dulness, but dry, crackling râles down front of chest.		Sweats, rigors. P. 112.	Purulent.	Abundant (4). In clusters of 20–30; sometimes none in field.	Naso-oral respirator (creasote and carbolic acid).	No improvement.
38.	*Chronic phthisis.					E. T. 102°–103°.	Muco-purulent.	Few (2).		Death a few days after examination.
39.	Incipient phthisis.	27						Few (1).		
40.	Sub-acute pulmonary and laryngeal phthisis.	37	2 years.	Cavities at both apices.	Tumefaction and probably ulceration.	E. T. 99°–103°. All the symptoms of fever.	Purulent.	Very abundant (9).		Death three weeks after examination. Autopsy—lungs riddled with cavities.
41.	Supposed incipient phthisis.	17		Prolonged expiration at right apex.		Emaciation; fever.		Very few (1). Only seen in one field in two preparations.		

BLE SHOWING THE RESULTS OF EXAMINATION FOR THE BACILLUS OF TUBERCLE IN 70 CASES OF DISEASE—*continued.*

No.	Disease.	Age.	Duration of Disease.	Condition of Lungs.	Condition of Larynx.	Symptoms.	Expectoration.	Bacilli of Tubercle.	Treatment.	Result and Remarks.
42.	*Chronic phthisis.	21		Impaired percussion at right apex, with cough, otherwise no sign.			Mainly mucous, slightly purulent, with large admixture of blood.	Few (2). 2-3 in field at a time.		
43.	*Phthisis pulmonalis *v.* bronchiectasis.						Sputum purulent.	Few (2). 2-6 in field, sometimes none, generally aggregated.		*In statu quo.* (Difference of opinion between two physicians as to nature of disease.)
44.	Unknown.	49	9 ms.	Prolonged expiration at right apex, with no percussion alteration.		Pulse quick; respiration hurried; cough; emaciation; diarrhœa; rigors.		Absent.		Not tubercular disease.
45.	*"Chronic cold."		1 year.				Mucous.	Absent.		
46.	Acute phthisis.	21	6 ms.	Dulness at both apices; bronchial breathing; crepitation.	Nil.	E. T. 99°-103°. Night-sweats; emaciation. Hæmorrhage from bowel.	Mainly purulent.	Usually abundant (5), but variable. Sometimes found in every field, at other times only occasionally.	Lime; tonics.	Death in two months after examination for bacilli.
47.	Pulmonary hæmorrhage.	28	3 years.			Formerly severe bleedings, now ceased.	Mucous.	Absent.		Recovery.
48.	*Doubtful phthisis (?).	20		Nothing abnormal detected.		P. 76 (3 P.M.) Cough; night-sweats; emaciation.		Absent.	Tonics.	Recovery.
49.	Acute phthisis.	29	6 ms.	Bronchial breathing at pulmonary apices.	Great tumefaction of epiglottis and interior of larynx.	T. 98°·4. P. 92 (2 P.M.)	Watery.	Absent. (Bacilli afterwards found in sputum.)		Gradual deterioration. Dr Hunter reports bacilli present in considerable quantities.
50.	Chronic rheumatism.	50		"No physical signs of heart mischief."		Persistent evening rise of temperature.	Mucous.	Absent.		Died a few weeks afterwards of diarrhœa.
51.	Chronic pneumonia of apex.		1 year.	Consolidation of right apex.		Hæmorrhage (pulmonary). Slight fever, about 1°.	Muco-purulent.	Absent.	Residence abroad.	Unchanged.
52.	Chronic pneumonia	46		Dulness of upper half of right lung, with coarse crepitation at angle of scapula.		Slight cough. T. normal.	Purulent (sanguineous at one time).	Absent.		"Consolidated lung has cleared up, and patient is recovering."
53	Sub-acute (?) phthisis. Cervical abscess.	18	8 ms.	Prolonged expiration at both apices, with coarse crepitation at right on coughing.		P. 92 (1 P.M.) Pallor.		Absent. (In this case the sputum was not examined, but the cheesy discharge from an abscess on right side of neck.)		Recovered.

54.	Croupous pneumonia.	18		Not clearing up satisfactorily. Tendency to break up.			Purulent.	Absent.		Complete recovery.
55.	*Doubtful phthisis (?).	20		Slight dulness and defective expansion at right suprascapular region.		P. 80. No fever. Night-sweats; cough; and expectoration.	Mucous.	Absent.		
56.	*Doubtful phthisis.	40	9 ms.			Hæmoptysis.	Scanty mucous.	Absent.		Recovery.
57.	*Doubtful phthisis.	34	6 ms.	Dry râle at end of inspiration at left apex, with slightly prolonged expiration and slight dulness.	Nil.	P. 104. T. 99°·5 (2 P.M.) Cough; formerly hæmoptysis.	Scanty. Purulent.	Absent.	Tonics.	
58.	Chronic phthisis.	35		Marked dulness at right apex.		T. normal. P. quick.	Mucous, slightly sanguineous.	Absent.	Sea voyage.	
59.	Struma.	20				Suppurative disease of bone (strumous).		Absent.		(Pus from abscess examined.)
60.	Sub-acute phthisis.	17	1½ year.	Dulness at left apex, with coarse crepitation down anterior surface of same lung.		T. 98°·9. P. 128.	Purulent.	Abundant (6). Separate and in clusters.	Naso-oral respirator, with creasote and carbolic acid, one hour daily.	No improvement.
61.	*Chronic pleurisy (?).			"Old pleurisy, with much condensation of left lung."			Profuse. Purulent.	Few (2). Sparse.		"Going down hill slowly."
62.	*Acute phthisis.			Dulness over right lung, with crepitation (after pneumonia).		T. 100°-103°. Pulse quick; loss of weight, etc.	Muco-purulent.	Abundant (4), about 20 in a field. Not generally clustered. V-shaped arrangement.		
63.	Scrofulous testis.							Absent.		(Cheesy matter of excised testis examined.)
64.	Sub-acute phthisis.			No physical signs of lung affection.		T. normal. P. 94.	Mucous.	Abundant (4). Most fields none; in one field a colony of 30–40.	Antiseptic inhalations.	
65.	*Doubtful phthisis.	77		"Rather equivocal signs of consumption of the aged."				Absent.		"Left lung getting more infiltrated with deposit."
66.	*Sub-acute phthisis.	21	1 year.	Dulness, with bronchial respiration at right apex.		Night-sweats. Increasing emaciation.	Mucous, with purulent masses.	Few (2). Not in every field.		Gradual decline.
67.	Chronic bronchitis.	70		Patch of dulness at one apex.				Absent.		Improvement.
68.	*Broncho-pneumonia.			Marked dulness over upper lobes, with bronchophony, and moist crackling at left inter-scapular space.		Laboured abdominal respiration; cyanosis; orthopnœa.	Mucous, with fibrinous casts of bronchi.	Absent.		Death ten days after examination of sputum.
69.	Acute phthisis.	29	6 ms.	Prolonged expiration at both apices, with dry râles at end of inspiration.		P. 106. Rigors; emaciation.	Scanty. Muco-purulent.	Few (2). Not in every field; one or two groups.		
	*Chronic phthisis.	40	2½ years.	Dulness at both apices.		Emaciation, night-sweats, but not much fever.	Muco-purulent.	Very few (1). Only 2–3 bacilli in whole slide.		

The cases in the preceding table may be thus classified:—(1.) Phthisical, 37; (2.) Non-phthisical, 22; (3.) Doubtful, 11.

I.—The Phthisical Cases.

These may be divided into the two great classes of acute and chronic. The acute class embraces cases of rapid phthisis, or caseous pneumonia, with fever and progressive destruction of the lung substance, while cases bearing a chronic character are associated with fibroid changes in the lungs, with a small degree of fever, and occasionally with periods of absolute quiescence. Applying the same arbitrary numerical rule[1] to both classes, the following are the results:—

	Number of Cases.	Total number of bacilli.	Average number of bacilli in each case.
Acute Phthisis.	25	98	3·9
Chronic Phthisis.[2]	9	11	1·2

Roughly speaking, the bacilli of tubercle are thus found to be from three to four times more abundant in the acute than in the chronic varieties of the disease. What are the conditions which appear to determine the presence or absence of the bacilli in the sputum in phthisis, and their numbers when present?

These appear to be:—

1. Acuteness or chronicity of the disease.
2. Condition of the lungs, especially in reference to the presence or absence of softening.
3. Degree of fever.
4. Character of the sputum.
5. Laryngeal complications.

1. *Acuteness or Chronicity of the Disease.*—As a general rule it can be broadly stated that, as we have already seen in our summary, the more acute the disease the more abundant are the bacilli, while, on the other hand, a chronic (fibroid) case, with the physical signs of cavities throughout the lungs, may be devoid of bacilli even so late as a week before death (Case 3). When the symptoms of active disease are in abeyance, bacilli cannot be found in the expectoration, as in Case 18. Two years previously, this patient, æt. 18, had severe hæmorrhage, followed by all the signs of phthisis. Now it was apparently quiescent, with a slight crackle at the right apex observed after coughing, both on inspiration and expiration; temperature 98°·8, and pulse 126. The morning sputum was mucous in character, and was not found, on repeated examinations by two different methods, to contain any bacilli. Fibroid changes in the lungs are inimical to the development of the bacilli, and, according to Williams, may even

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[1] See explanatory note to tables.

[2] The three remaining cases of phthisis were two of incipient disease, in each of which a very few (1) bacilli were present, and one case of sub-acute disease, in which the pus from a cervical abscess was examined with negative results.

reduce the numbers met with in the sputum, not altogether because the bacilli are few or non-existent in the lungs, but because the lung contractions block up the communications between the cavities and the bronchi, and the bacilli consequently cannot escape into the sputum, which in these cases may be mainly bronchial in character. In acute general tuberculosis, where the system rather than the lungs is affected, the sputa may contain very few bacilli.

2. *Condition of the Lungs, especially in regard to the Presence or Absence of Softening.*—During the process of cavity formation, attended by profuse purulent or muco-purulent expectoration, bacilli are usually found in the sputum in fair abundance. Williams states that an intimate relationship exists between the numbers of bacilli and the process of excavation, and that the former increase largely in numbers whilst the latter is progressing. So long as there exists a cavity with discharge, the bacilli persist, even though all cavity extension may have ceased. It is a mistake to suppose they may not be met with long before the stage of softening or even that of consolidation has been reached, for they can be detected in the sputum in most incipient cases at a time when signs of pulmonary disease are either wholly absent or doubtfully present. As a rule, however, they are, in incipient phthisis, neither so numerous nor so generally distributed throughout the sputum as in cases of extensive softening. The following cases, taken from the table, are recorded in greater detail in illustration of the fact now stated:—

CASE 8.—A male, æt. 50, was first seen on 28th March 1883. He complained of hoarseness, great pain in the ears, and difficulty and pain in deglutition. The laryngoscopic appearances were irregular inflammatory thickening of the mucous membrane, with ulceration of the vocal cords. A careful examination of the chest showed slightly prolonged expiration at the right apex anteriorly, with some dry bronchitic sounds; the clavicular percussion note was slightly impaired on the same side. The sputum was rather profuse, and muco-purulent in character; it contained abundant bacilli (5).

CASE 21.—Female, æt. 27, seen on 17th September 1883. She complained of hoarseness and pain in swallowing. Had had several attacks of bronchitis and, two months before, an attack of hæmoptysis. At this time there was chronic irregular thickening with ulceration of the mucous membrane of the larynx, no percussion dulness over lungs, but a dry crackle at the end of inspiration at the infra-clavicular region on both sides. The morning sputum was muco-purulent, mainly mucous, and contained abundant bacilli (4). A report obtained three months subsequently stated that the patient was rapidly deteriorating.

CASE 64.—Male, æt. 40, examined and reported on by two practitioners as presenting no physical signs of lung affection. There was no appreciable fever, only a troublesome spasmodic cough. The sputum was mucous, and contained the bacilli of tubercle, not uniformly diffused throughout the preparation, but mainly massed in one field to the number of 40–50, with isolated ones scattered around. (No further report as to the progress of this case has been obtained.)

These cases presented no physical signs indicative of breaking up of the lung substance, and but few of any lung affection whatsoever. It is not difficult to understand why neither softening nor consolidation, at least such as can be detected by physical signs, should be necessary to the implantation and growth of the bacilli. Watson Cheyne believes that the tubercle bacilli reach the lung by inhalation, and develop, in the first instance, *in the epithelial cells lining an alveolus.* This alveolus becomes filled with cells, neighbouring alveoli become affected, and the same process goes on in them. He has shown that the bacilli are found not only in the caseous material, as met with in advanced phthisis, but also in the epithelioid alveolar cells of the early stage of the disease. In such cases, therefore, they might be found in the expectoration prior to the stage of consolidation. The inflammation associated with their presence might be accounted for in either of two ways: it might precede and prepare the soil for their reception (*e.g.*, simple bronchitis), or it might be the result of their irritation of the alveolar walls. The bacilli found at this early period of the disease are neither so numerous nor so active as regards divisibility as those met with in cases of rapid softening (Case 26) and in cases of acute and rapid cavity formation. Of all the cases examined, the bacilli were most numerous in the following:—

CASE 40.—Female, æt. 37, ill for about two years. Symptoms of laryngeal phthisis have now supervened, with fever, etc. Physical signs of cavities at both pulmonary apices and throughout left lung. Bacilli very abundant (9). Autopsy (ten days after examination of sputum)—Left pleura strongly adherent; substance of lung almost entirely destroyed, and replaced by several large vomicæ with suppurating walls. Right lung, disease less advanced. The upper two-thirds of the lung were thickly studded with patches of lobular catarrhal pneumonia, which in several places was breaking down and suppurating, causing the formation of various small cavities.

Williams believes that the bacilli are found in the sputum in the stage of early consolidation, and that then their numbers correspond to the number of alveoli in which tubercular changes are proceeding. Watson Cheyne states that in large numbers they indicate either an affection of numerous alveoli or a large amount of caseous material. The statement of West (*Lancet,* 21st April 1883), that their presence in the sputum is evidence of excavation, is evidently erroneous; it indicates that they have effected a lodgment either in the alveolar epithelial cells, in the alveolar contents, or in a cavity. The rapid formation of suppurating cavities favours their numerical increase, but is not necessary to their presence even in somewhat full numbers. They may be detected in the sputum when this is broncho-alveolar in character and origin and is apparently symptomatic of simple bronchitis.

3. *Degree of Fever.*—A thermic rise frequently accompanies the presence of bacilli in the sputum. The degree of fever present may be very slight, and occasionally the thermometer-reading

may remain normal, or nearly so, for days or even for weeks, the only suspicious circumstance being certain sporadic attempts on the part of the temperature to reach triple figures. Several examples of this are recorded in the table:—

Case 8.—Laryngeal phthisis; sputum examined on ten separate occasions for bacilli of tubercle, with positive results on each occasion. Their numbers varied from 2 to 5 of standard, but were usually about 5. Coincident with the examination of the sputum and the presence of the bacilli in it, observations were made with the thermometer on fifty occasions, with the following results: —The average morning temperature was 98°·2 : average evening temperature 98°·6. On two occasions only did the mercury touch 100°. The pulse usually averaged about 90, and on two occasions only reached 100.

Case 5.—Female, aged 10. Illness commenced with a sharp hæmorrhagic attack during the summer of 1882. This was followed by dulness, with coarse crepitant râles at the left apex, but no signs of a cavity. The patient was treated by the administration of lime and phosphates, and by antiseptic inhalations. The winter of 1882–83 was spent at Bournemouth.

15th April 1883.—A specimen of sputum was forwarded from Bournemouth, and examined for the bacilli of tubercle for the first time. The sputum was scanty, and mainly purulent; tubercle bacilli were present, but were not readily detected, being mainly clustered in one small area of the slide. The patient meanwhile was improving, so far as symptoms and physical signs were concerned; the evening temperature usually ran from 98°·4 to 98°·8, occasionally reaching to 99 or a trifle over this.

28th May.—Sputum scanty, purulent, with tubercle bacilli in every field, fairly abundant (4). E. T. 98°·4 to 98°·8. Uses oro-nasal respirator for several hours daily.

20th July.—Sputum purulent, scanty. Bacilli present (4), but not uniformly in every field. (Since last report, the patient had returned from the south of England to Scotland.)

28th July.—The ordinary medical attendant reports thus—"As regards the question of pyrexia, I think one might say it was absent. The temperature is usually normal, always so in the morning, frequently in the evening. It never rises in the evening above 99°, but may be 98°·6-·7-·8 occasionally.

7th September.—Since last report the evening temperature has on two occasions touched 100°, and has been frequently 99·6–·8 or ·9. Sputum purulent. Bacilli fairly abundant in every field (5), apparently rather more than on last occasion, and in groups.

26th September.—There is very slight dulness at the left apex anteriorly, with a dry inspiratory crackle on coughing. E. T. usually 98°·6. Left for south of France.

29th October.—Specimen of sputum forwarded from Hyères, purulent, with tubercle bacilli fairly abundant (5) in every field. The patient's general condition has improved: has gained in weight 4 lbs. E. T. on one occasion has touched 100°; as a rule it is 98°·5–99°.

In these cases the temperature rise was very slight and only occasional. The other usual indications of fever were also in abeyance, and in Case 5 a positive increase of weight occurred whilst the numbers of bacilli appeared undiminished. Febrile disturbance, therefore, is not an essential concomitant of the bacilli of tubercle, and though usually present in acute cases, in which the bacilli are generally most numerous, its degree affords no criterion as to the numerical strength of the organisms. Examples of a high degree of fever with numerous bacilli are seen in Case 40 (bacilli 9), in which the average of 18 observations was, M. T. 99°·5, E. T. 101°·7; highest temperatures, M. 100°·6, E. 103°·9; and in Case 26, where with fever, rapid softening of the lungs, and muco-purulent sputum slightly streaked with blood, the bacilli (= 7) seemed to be of large size and well developed. It may be held, therefore, that bacilli are present in greatest numbers in febrile cases, but the fact of the temperature being little if at all raised is not inconsistent with their presence. Williams, who also believes that the bacilli may be present in non-pyrexial phthisis, and, on the other hand, that they may be few in cases presenting much pyrexia, explains these views by stating that tuberculization and excavation may take place without pyrexia, and the examination of the sputum teaches what is going on in the lungs only. The important practical point to note is that the thermometer cannot be relied upon to give early evidences of tuberculization, and that the careful examination of the sputum for bacilli is the earliest and safest guide to exactitude in diagnosis.

4. *Character of the Sputum.*—Tubercle bacilli usually abound in purulent or muco-purulent sputum, but they may be detected in a purely mucous sputum, provided this be derived from the lungs. The character of the sputum is sometimes largely influenced by the period of the day at which it is ejected, being purulent in the morning and more mucous during the day. In a muco-purulent sputum, bacilli, when present, are usually two to three times more numerous in the purulent than in the mucous part (Case 11). The bacilli are therefore more likely to be detected in the morning sputum, or are found in greater numbers at this period than at subsequent hours during the day. The following case illustrates this:—

CASE 46.—Acute phthisis, with softening and subsequently cavity formation at both apices; fever; death.

13th June 1883.—Morning, sputum purulent, bacilli abundant (6).
29th.—Evening, bacilli almost absent (1).
30th.—Morning, bacilli abundant (6).
3rd July.—Evening, bacilli few (2).
4th.—Morning, bacilli abundant (5).
20th.—Evening, sputum purulent, bacilli abundant (4).
21st.—Morning, bacilli abundant (4).

The greater abundance of bacilli in the morning sputum, though frequently observed, is not of universal occurrence. Bacilli are occasionally met with in equal numbers in both the morning and the evening sputa, and sometimes they are more numerous in the latter. Sputum ejected during the day is frequently found, particularly if the patient have brought it up in compliance with a request on the part of the physician for purposes of examination, to be devoid of bacilli, while in a spontaneously expectorated sputum, especially in the morning, they may be readily detected.

CASE 16.—Subacute pulmonary and laryngeal phthisis. *17th July.*—Afternoon, sputum muco-purulent in character, containing no bacilli of tubercle.

18*th*.—Morning, sputum scanty, muco-purulent, containing a few bacilli (3), not uniformly diffused throughout the slide, but in clusters.

CASE 21.—Subacute pulmonary and laryngeal phthisis. 17*th September* 1883.—Sputum, ejected in consulting-room for purposes of examination, of a mixed mucous and salivary character; examined for bacilli of tubercle by two methods, with negative results. 18*th September*.—Morning, sputum muco-purulent, but mainly mucous; bacilli present, few (3).

On those occasions when the bacilli of tubercle were absent, the sputum, being as it were forced up for the occasion by the patient, is often largely composed of saliva, and probably contains little if any of the pulmonary secretion other than bronchial. When pyrosis is associated with the lung disease, specimens of the sputum are apt to yield negative results on account of their large admixture with the gastric secretion. This is undoubtedly the explanation of the failure to find bacilli in Case 13, the only example of phthisis in which they could not be detected. The admixture of blood with the expectoration, if in large quantities, conceals its true character in the same way as the gastric secretion in pyrosis, and bacilli are seldom found in abundance in such instances. The presence or absence of the bacillus, however, is of great service in assisting to distinguish between simple (non-specific) and tubercular (specific) hæmorrhages from the lungs, as in Cases 4 and 23. In the latter case alone was the bacillus of tubercle present, and this fact had a material influence on the prognosis. The bleeding in the former was primarily of cardiac origin, and soon entirely disappeared under proper treatment, whilst in the latter it was followed by extensive destruction of the lung substance. A slight tinging of the sputum with blood does not interfere with the presence of the bacilli, which, if present, are as readily detected as when the sanguineous streaks are absent. In sputum which has undergone decomposition on keeping at a temperature of 50° to 60° F. tubercle bacilli can still be found, generally, however, in lessened numbers. Williams states that bacillary sputum, after having been kept in a moderately warm room for ten days, showed a decided increase in the number of its bacilli.

5. *Laryngeal Complications.*—When the tubercular affection of the lungs is complicated by a similar condition of the larynx, bacilli seem to be most abundant. Reference to the table will show that in laryngeal tuberculosis the bacilli are always in excess. This latter condition renders available another method for obtaining secretion for examination, namely, that of directly removing by means of a brush the pus or muco-pus which more or less completely coats the larynx, and of testing this in the usual way. This seems to be the most satisfactory method for determining whether an inflammation of the larynx is or is not tubercular in character, and no examination, laryngoscopic or otherwise, can be regarded as complete where it is omitted.

CASE 8.—Laryngeal phthisis. *25th July* 1883.—Laryngeal secretion removed by brush ; watery-mucous in character. No bacilli found in this secretion, whilst on the same date they were readily detected in the sputum. *12th August.*—Little muco-pus, removed from the larynx by means of a brush, contained a very few tubercle bacilli.

CASE 19.—Pulmonary and laryngeal phthisis. *7th August* 1883.—A little purulent secretion coating the inter-arytenoid region of the larynx was successfully removed by means of a brush, and was found to contain a few bacilli (3). Bacilli were also found in the expectoration of the next morning. (The diagnosis of laryngeal tuberculosis in both these cases was correct.)

Negative results in such cases may be due to insufficient dexterity in removing the secretion from the larynx, coupled with the irritability of fauces which is so frequently symptomatic of laryngeal phthisis. This was undoubtedly the cause of failure in Case 20 (pulmonary and laryngeal phthisis), in which a few bacilli were found in the sputum, but none in the mucus coating the brush, in Case 8 on the first attempt, and in Case 13. A negative result in suspicious cases of chronic laryngitis, arrived at after several careful examinations of the sputum, is, on the other hand, distinctly of value as demonstrating the non-tubercular character of the affection, and favourably affects the prognosis (Case 30).

Post-mortem examinations, in cases of laryngeal phthisis, show the secretion coating the larynx to be swarming with tubercle bacilli (Case 7). The proximity of their situation to the laryngeal outlet, and their proneness to become mixed with the pulmonary secretion, even though this be merely bronchial in character and origin, readily account for their greater prevalence in the expectoration in tuberculosis of the larynx than in cases where the lungs alone are affected.

Certain other conditions appear to affect the numbers of bacilli in the sputum. Traumatism, as in stone-mason's phthisis, is accompanied by a small number of bacilli, as in Case 37, in which, as the result of a first examination, they were very few, and not commensurate with the severity of the disease. On subsequent examinations they were detected in greater numbers. This agrees with Watson Cheyne's observation, that the inhalation of dust, etc., does not lead directly to phthisis, but to inflammation and proliferation of the alveolar epithelium, on which the bacilli of tubercle become subsequently grafted. In acute phthisis, towards death, they appear to multiply very rapidly, as in Case 11, where on the evening of the 8th June the bacilli averaged 2, and on the evening of the 22nd, when they amounted to 8, the patient dying on the 22nd. This rapid increase towards death can, of course, be readily accounted for by correspondingly rapid caseation of the lungs. The number of bacilli in the sputum undoubtedly varies considerably in examinations made within a few hours of each other. This must be due to causes which, when we consider that a secretion of such uncertain composition and springing from such different sources as the sputum acts as the medium of the conveyance of the bacilli, we perceive to be readily explicable.

It will be noticed that in three cases in which other material than the sputum was examined—*i.e.*, the discharge from a scrofulous gland in a phthisical patient, the pus from a scrofulous affection of bone, and a tuberculous testis—bacilli were not found. An attempt was made in Case 46 to detect them in the atmosphere surrounding the patient, by placing by his bed glycerine plates, leaving them there during the last sixty hours of life, and then examining for the bacilli after washing with distilled water and evaporating down, but with negative results. Further observations, however, are necessary in this direction before the result of this single case can be held as conclusive.

II. The Non-Phthisical Cases.

In all these the bacillus was absent. Case 61, which occurred in the practice of another practitioner, was described by him as "old pleurisy, with much condensation of left lung." The presence of bacilli in the sputum showed that tubercular mischief was at work, and the report of the case some months afterwards indicated that the unfavourable prognosis had been borne out. In contrast with this Case 52 may be noticed. This was described as one of "chronic pneumonia, with dulness of the upper half of the right lung," and sanguineo-purulent sputum. The sputum contained no bacilli of tubercle. A favourable prognosis was given in this instance, and the subsequent report of the case was to the effect that the "consolidated lung had cleared up, and the patient was recovering." In the other instances of non-phthisical disease the bacilli of tubercle were absent on repeated examinations. In the series of cases with sputa of unknown origin, no difficulty was experienced in separating the tubercular from the non-tubercular. According to these results, the conclusion must be obvious that these bacilli are not found in non-tubercular disease, and that their presence in the sputum is especially valuable in separating cases of simple chronic pneumonia and bronchiectasis from those of phthisis. Williams estimates highly their value in this respect, as also in differentiating syphilitic from tubercular disease of the lungs, chronic phthisis from chronic pleurisy, and in the diagnosis of simple chronic pneumonia with extensive consolidation and well-marked crepitation at the apices of one or both lungs, with or without a history of hæmoptysis.

III. The Doubtful Cases.

Examination of the sputum in cases of doubt, in which dyspepsia, emaciation, rigors, cough, and accelerated pulse are amongst the symptoms, as in Cases 2 and 9, or with more pronounced symptoms and dubious physical signs, as in Case 57, in all of which the tubercle bacillus was absent and recovery took place, is of the greatest importance in regard to prognosis. The facts already shown in this paper, indicating that the tubercle bacillus may be found in the phthisical sputum when mucous in character, and at a period antecedent to softening and even to consolidation, render the examination of the expectoration in every case of doubtful or supposed incipient disease of the utmost importance, with this proviso, that if a negative result be obtained the sputum should be re-examined on several subsequent occasions.

CONCLUSIONS.

The conclusions arrived at from the study of the foregoing cases are :—

1. The bacillus of tubercle is pathognomonic of tubercular disease: found in the sputum, it indicates that active tubercular disease is in progress in the lungs, in the larynx, or in both.
2. It is absent in non-phthisical disease, in some cases of chronic (fibroid) phthisis, and during quiescent stages of the disease.
3. It is found in greatest numbers in acute phthisis with fever, softening, and cavity formation, but is also present in fair numbers before consolidation can be detected, especially if the larynx be affected, and it is thus useful in the diagnosis of incipient phthisis.
4. In a given case its numbers vary according to the nature and origin of the pulmonary secretion, and the period of the day at which it is expectorated, as also according to whether it is or is not free from extraneous matter in excess—*e.g.*, gastric secretion, saliva, or blood.
5. Found in the laryngeal secretion on its direct removal, it is a most valuable aid in the diagnosis of laryngeal tuberculosis.
6. In hæmorrhage from the lungs, the presence or absence of tubercle bacilli in the hæmorrhagic fluid has a most material influence on the prognosis.
7. Negative results in important or dubious cases cannot be held as conclusive unless examinations by different methods have been made on at least three different occasions.
8. Whilst its diagnostic value is thus of a very high standard, indicating the existence of tubercular disease, its prognostic value cannot be determined with accuracy, inasmuch as it may be as abundant in a comparatively slow non-febrile case as it is in a more acute and febrile one.

II.—RECORD OF TWO CASES OF EXTRA-UTERINE PREGNANCY—ONE OF THEM SUCCESSFULLY TREATED BY LAPAROTOMY AND INTESTINAL RESECTION.

By Angus Macdonald, M.D.

(*Read before the Edinburgh Obstetrical Society, 12th December* 1883.)

Mr President and Gentlemen,—Our lynx-eyed and enthusiastic treasurer, on the second last evening of last session, prompted me to suggest that it would be better to postpone the discussion upon Professor Freund's paper till a future meeting of the Society. I readily agreed to this proposal, because I felt convinced that, with a great deal of other work on hand, it was impossible to do justice to a paper of so great merit, and dealing with one of the most difficult subjects that can come into the hands of the gynæcological practitioner. But I must confess I did not at first see the cloven foot concealed in my prompter's suggestion, else I might have left him to propose the adjournment himself. I was not long allowed to remain in the dark, however; for so soon as it was settled that the debate be adjourned, our treasurer stated that as I had originally moved the adjournment of the debate, I was in duty bound to open it. I then experienced, I confess, feelings very much akin to those of Birdofreedom Sawin when he, at a public-house meeting, having voted for himself as president of the republic, was brought in for paying the drink all round, inasmuch as he was the only person present who was voted on as a candidate. However, I have taken a plan of getting out of the difficulty which I am sure will meet with the approval of Dr Freund, from his expressed desire to see fresh contributions to the subject, and I trust, also, may not be uninteresting to you,—*i.e.*, I have placed on record two cases observed and treated by myself, as a contribution to the literature of the subject, instead of entering into a critical analysis of Dr Freund's paper.

The latter of these cases has been already published by me in a paper upon intra-peritoneal pelvic hæmatocele in the *Edinburgh Medical Journal* for January of this year; but from the point of view of etiology it is equally fair to class it as a case of extra-uterine pregnancy.

The former of the cases is as yet, so far as I can find, *unique* in many particulars, and affords grounds to encourage hope in even the most unpromising cases of abdominal surgery. But it will perhaps be better for me to proceed, without further comment, to record the cases, so that you may be able to judge for yourselves on these matters. I shall therefore at once proceed to read:—

Case I.—Mrs S., æt. 28, residing at Comiston Mains, admitted into Ward XXVIII., Royal Infirmary, on 19th May 1883, complaining of abdominal pain and swelling, œdema of left leg, and great exhaustion, recommended by Dr Graham of Currie.

History of Present Attack.—Patient ceased to menstruate in October; up to that month she was perfectly regular. Shortly afterwards she felt great pain in the lower part of the abdomen on two distinct occasions, both of which lasted for a week. She obtained some medicine from her doctor, which relieved the pain.

In December she was much troubled with vomiting and sickness, beginning in the morning and continuing during the day. This was found to have no relation to the ingestion of food. The vomiting continued until about four weeks ago, when it suddenly ceased, and has not returned.

Patient says she distinctly felt fœtal movement until a month ago. She is not quite sure when she first noticed it, but is quite positive as to its having been unmistakably present.

In February her breasts began to swell, and continued to do so markedly. Milk could be squeezed out of them until a month before admission. Since then the breasts have become small and hard, the nipples, however, remaining large and prominent.

Four weeks ago she was working very hard at home, and thinks she overstrained herself. She then had pain like labour pains, and noticed that her abdomen was beginning to swell, and felt a deep-seated pain in the lower part of it, which became so bad that she had to take to bed. As the swelling increased she had great difficulty and pain in passing water.

About a week before admission she noticed a sanguineous discharge from the vagina. A few days previously her left leg became swollen, beginning at the ankle and gradually extending upwards to the hips.

Her family and previous health are good.

State on Admission.—Patient pale, anxious-looking, and emaciated. The dropsy referred to in the left leg still present. Temperature varying from normal in the morning to 103° or 104° in the evening.

Genito-Urinary System — Sexual History.—Patient began to menstruate at 15 years. The quantity of discharge at each period was profuse, and duration seven days. Sometimes slight dysmenorrhœa. She had one child six years ago.

Physical Examination.—Abdomen generally distended. Resonant all over, except just above the symphysis pubis and toward the right flank, where it is relatively dull. Left flank is quite clear. Measurement round umbilicus, 33¾ inches.

Per Vaginam.—Vagina is short; the uterus is depressed, the vaginal portion being soft and enlarged like that of a pregnant uterus. There is a tender fulness in the pouch of Douglas. In the right and left fornices, on deep pressure, a rounded mass can be felt also. Sound enters 5 inches, and communicates a feeling of increased resistance as it passes over the endometrium.

Per Rectum.—A large semi-elastic mass projects into the pouch of Douglas, flattening the rectal wall, and giving rise to great pain when touched.

Urine reddish colour, slightly acid. Specific gravity, 1014, and it contains a slight trace of albumen.

Alimentary System.—The patient's tongue is red and fiery-looking. The appetite is poor. There has been considerable diarrhœa of late. The breath smells strongly of "newly-mown hay."

Circulatory System.—Palpation and percussion resonant. A soft murmur accompanies the first sound in the mitral area. Pulse rapid, rather compressible, and collapsing readily.

Respiratory System.—Normal.

Strict rest was ordered, and milk diet. Symptoms to be met by astringents, opiates, etc., as they should arise.

From date of admission till 12th June a varying amount of pus and blood was seen to pass from the patient's rectum. The abdomen at the latter date is found still distended, though measurement round the umbilicus is somewhat less (32 inches). The uterine tumour is still felt close to the umbilicus. The mass spoken of previously as flattening the anterior wall of the rectum is not so prominent now; it is very irregular in outline, and tender to the touch. Within reach of the finger no opening can be felt in its surface. The swelling has disappeared from the left leg. Breath smell now natural.

2nd July.—Abdomen flaccid, and much smaller than before. No pain is felt on pressure; in the left groin there is a feeling of increased resistance; the uterus can also be felt above the pubes. Measurement round the umbilicus, 30 inches.

Per Vaginam.—The tumour is felt behind and to the right of uterus; its surface is very irregular, and is found to extend above the brim of the pelvis on the left as well as on the right. Sound enters 5 inches; surface of uterus still rough.

Per Rectum.—The tumour is felt, especially on the right side, pressing on the surface of the uterus; it is tender, and communicates no feeling of softening. On pressing the abdomen over the tumour to the right of the mesial line, a peculiar crackling or crepitating sound is elicited.

5th September.—General condition of patient has much improved, though the pain in abdomen during the last week has increased. Measurement around umbilicus, 34 inches. The pain in the abdomen is increased with every attempt at motion. Bowels of late have been regular.

As the patient had been on our hands since 19th of May, being now nearly five months, and as, though she had improved so far as her general condition was concerned, and no longer showed any septicæmic symptoms, she yet suffered greatly from pain, and became threateningly ill when any attempt at sitting up was made, I came to the conclusion that some active means were warranted in being taken with the view of affording her permanent relief. As against operative measures we had to consider the fact that at one time undoubtedly a connexion existed between the sac of the tumour and the intestinal canal. But as the intestinal symptoms had of late been in abeyance, I resolved to operate.

Accordingly, assisted by Drs Chapman, Dunlop, and Playfair, on 9th October 1883 I opened the abdomen, with antiseptic precautions minus the spray. Drs Hart and Barbour, along with several other medical friends, were also present. Abdomen was opened and peritoneum reached without difficulty.

It was found that the remains of the fœtus were attached to the right and posterior aspects of the abdominal wall. What appeared to be an abdominal adhesion of the cyst was torn asunder, and the bones of the skull, laid bare by this means, were removed. When this apparent cyst was drawn forward, it was found to consist of about 5 or 6 inches of the small intestine, the walls of which, where they lay in relation to the abdominal walls, were thick, softened, and almost gangrenous. In the cavity in which the bones of the fœtus lay there was a considerable amount of fæcal matter. A loop of intestine which was adherent to the part above mentioned was carefully separated from the rest, and was found to contain a fæcal fistula. The whole of the rest of the contents of the cavity in which the fœtus lay were now removed carefully, and the cavity sponged out. The portion of the intestine already mentioned, whose wall formed part of the cyst, was now cut out, and the healthy ends of the bowel brought together as completely as possible by a continuous catgut suture, care being taken to approximate the raw edges completely without including any of the mucous membrane. The stitches were passed very close to one another, and this part of the operation took up a considerable time. The gap in the mesentery was also brought together by continuous sutures.

During this part of the operation there was some hæmorrhage, which was, however, completely arrested by the pressure of the sutures. The edges of the fæcal fistula above referred to, having been thoroughly rawed, were carefully brought together by catgut suture.

The abdomen was now sponged dry and the wound closed, a large indiarubber drainage-tube being introduced at the lower angle of the wound, so as to extend to the bottom of the cyst, and secured in position by passing one of the deep sutures through its texture.

Temperature after the Operation was 97°·6; pulse 82. In the evening the temperature was 101°·4; pulse 120, and very thready. During the night the bowels were moved four times, the evacuations being blood and mucus. Great thirst was experienced, and slight sickness. Slept a little. Patient was kept under influence of opium.

10*th October* (*second day*).—Temperature 99°; pulse 126–32, quick and thready. The discharge from the wound was of a dark greenish-brown colour, thick and putrid. The patient has a bad cough, which causes her much discomfort. A mustard and linseed poultice (with a piece of flannel between poultice and skin, to keep in the heat and to prevent blistering) was applied to her chest, which gave great relief. The thirst is still very bad, but water was given in teaspoonfuls now and then, with occasionally a small piece of ice. The ice, however, produced emesis. Towards evening the patient became exhausted. Brandy and champagne were given, a teaspoonful of brandy to a tablespoonful of champagne, every half hour. Bowels moved quite naturally. She slept a little during the day. At 11 P.M. temperature went up to 102°·2; pulse 130. During the night the patient was able to pass urine, it having been drawn off previously. She was very restless, and so morphia was given, and she slept a few hours.

11th October (*third day*).—Temperature 98°; pulse 120. Stimulants were given as usual, and peptonized meat suppositories were introduced, at first every hour, then every two hours. Sickness was caused by the brandy, so champagne was given alone. After a time that also was rejected, and brandy was again given, and no sickness followed.

The discharge from the wound was now found to be mixed with fæces. Accordingly the dressing was changed from protective and salicylic wool to marine lint and oakum, which was changed every four hours, the bowels still acting.

From 12th October to 22nd October (*fourteenth day*).—Patient continued gradually to improve under the same treatment, sleeping slightly better and looking brighter. On the 22nd of October the drainage-tube was taken out. A charcoal and mustard poultice was used to remove the crust formed by the salicylic cream, which I should have mentioned as being put on. Since the tube was removed, no fæces came by way of the wound.

The removal of the crust just referred to left a large skin-denuded surface on either side.

25th October (*seventeenth day*).—One-half of the raw abdominal surface was painted with liquefied gelatine and a coating of melted paraffin. The side that was not painted bled very much. The patient slept better during the night. Bowels moved very often, and the evacuations were very offensive.

27th October (*nineteenth day*).—Patient complains of a fainting sensation, and great soreness all over the abdomen, but on the whole feels pretty well.

The gelatine came away in a cake, owing to the continued discharge from the wound, the part which had been painted looking better than that which had not. The next day gelatine was placed on both sides of the wound, and was found to adhere better than on the last occasion. Patient now takes large quantities of milk, and occasionally beef-tea.

This treatment gradually improved the local irritation very markedly and rapidly. The incision, which at one time threatened to open up, began to heal kindly throughout its entire extent, and by the end of November the irritated surface was perfectly healed.

Latterly an application of boracic acid in glycerine was employed.

12th December 1883.—At the present time the abdominal surface is completely free from rawness—the wound is entirely healed. There is neither abnormal distention nor abnormal dulness in any part of the abdomen. The abdomen, when percussed on the seat of the fœtal sac, gives a perfectly resonant note.. The bowels have gradually improved in their action from six times a day to thrice daily, twice daily, and, for the last six days, once a day only.

The patient is putting on flesh and is getting up daily. She walks easily, and feels gaining strength daily. I examined her per vaginam this afternoon, and I find now that all pelvic thickening is completely gone. The uterus is natural in size and quite movable, and not a trace of any deposit or of tenderness can be felt per vaginam. Indeed, the patient gives now every promise of complete restoration to health.[1]

This would appear to have been a case of abdominal pregnancy which had settled in the right posterior part of the abdomen, and in which the child had lived till about the end of the sixth month. About the time the fœtus died, inflammation took place in the sac. Considerable peritonitis was produced, with apparently thrombosis of the left iliac vein, and consequent dropsy of the left leg. Concomitantly with these there was absorption of the putrid materials contained in the sac, and the production of septicæmic symptoms, as indicated by the character of the breath and the temperature when she came into the hospital. This threatening state of matters was relieved greatly by the bursting of the sac into the bowel, and the consequent free discharge of fœtid pus per anum.

Into the grounds of diagnosis in this case it is hardly worth while to enter, as these were only too plain. We had evidence of an enlarged uterus which was empty, and along with that a very complete history of the occurrence of pregnancy with fœtal movements and milk secretion.

As the fœtus had died, we had no scruples in using the uterine sound to confirm our belief that the uterus was empty.

Though the diagnosis was easy, yet the sequel has proved that the case of Mrs S. is extremely interesting. The centre of importance in the case is its treatment. It may be doubted whether I was warranted in attempting to remove the bones of the fœtus; and, indeed, from my experience of the alarming nature of the complications found, I would be much inclined, in another similar case, to act upon the principle which was aptly put forward by Dr Hart when he came to see the patient the day after the operation, viz., when there is any reason to fear communication between the sac and the intestinal canal, the moral of this case is to let well alone. Whilst I heartily said Amen to Dr Hart at that time, I am of opinion now that something has been added to our knowledge of what can be done by operation on the intestinal canal by the experience of this extraordinary case, and that though the general principle may be true, there is reason to expect not a few exceptions to it.

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[1] The patient left the Infirmary on the 9th of January 1884 in good health. With the exception of one day on which castor oil was administered, when there were three stools, the bowels have regularly moved once, and only once, daily since the 6th of December 1883. The patient has gained rapidly in flesh and strength, and has been taking ordinary food, including meat and fowl.

No one present at the operation believed that the woman could live over twenty-four hours, yet to our surprise and delight she is now living and well, and nearly two months have passed since the operation.

Besides, what was I to do? The patient had been, as above stated, nearly five months in hospital, and though she had improved very much, yet the slightest attempt at sitting up brought on attacks of pain that threatened to light up afresh all her peritoneal evils. I could not continue keeping the patient much longer in the house, and to send her out seemed consigning her to certain death. I accordingly reluctantly resolved to operate.

From the amount of suffering which the history of this case shows that the patient went through, I should not, I assure you, lightly subject another patient to the same ordeal. But I rather think that if a patient similarly situated were to present herself again in my clinique, I would feel warranted, in the light of the experience gained by this operation, to give her a chance for her life by operating.

It will be noticed that the fœtal sac occupied the posterior and lateral aspects of the abdomen on the right, passing posteriorly behind the ascending colon, and anteriorly being closely connected with a loop of the small intestine, at least six inches long, which freely communicated with the sac, and, indeed, formed part of its wall, as we found it. This intestine was adherent to the abdominal wall; and it was on separating this adhesion by very gentle traction, believing it was the upper wall of the sac of the fœtus, so as to get at the bones which I felt through it, that to my horror and dismay I found myself in the cavity of the intestine.

It is idle now to discuss the question whether with greater care it would have been possible to avoid this lesion of the bowel. I simply may say I do not think so, if the operation was to be carried out at all. Having found myself in the unlucky predicament of having to deal with an opening involving six inches or so of the intestinal canal, the walls of which were ragged, thickened, softened, and almost gangrenous, with, in addition to that, a considerable fæcal fistula of another loop of small intestine, I did my best for the patient by cutting out the unhealthy torn piece and bringing together the raw healthy surfaces as accurately as possible, whilst at the same time I rawed the edges of the small fistula and brought them thoroughly together. This left a gap in the mesentery, which had also to be sewed up. As no operation of this sort was expected, we had made no special preparations for it, and were only provided with good catgut.

I acted chiefly upon Sir Spencer Wells's experience, who, finding he had made a considerable cut into the colon in one of his operations, states that he brought the opposing surfaces together with a continuous catgut suture. This I did to the very best of my ability, taking care to bring out the needle on the one side and enter it on the other exactly at the edge of the mucous membrane, so as to avoid including any portion of the latter in the grip of the suture. The stitches were also put very close together. The sequel shows that perfect coaptation must have been secured.

I really do not know whence the small quantity of fæces came which were on several occasions observed previously to the removal of the drainage-tube. I am inclined to believe that it may have been either from some fæces not reached by the sponge in our attempts at emptying the sac, or from a third sinus which had been unobserved, and which had been situated in the large intestine, as the quality of what was discharged was different from the milky-looking chyle which one sees in a case of a fistula of the small bowel. If due to the latter cause, the opening must have been small, and must have spontaneously closed up as the other parts healed.

Much advantage was derived, in the healing of the eczematous irritated surface, by the gelatine and paraffin dressing, which was suggested and carried out by Dr Cockburn, to whom I owe thanks for his kindness in this connexion. The distress from the raw abdominal surface caused by the stinking discharge was truly awful for some time.

I have stated that this case appears to me in some points unique, and I still think so. This extraordinarily perfect recovery after resecting six or seven inches of bowel is very encouraging indeed, and ought to make us less frightened if, in case of accident during abdominal operations, the intestines should unfortunately be injured.

Of course, resection of the upper end of the intestinal canal for cancer of the pylorus and stomach, etc., has been practised with more or less success by Billroth and other surgeons. Operation in this situation is, both on account of the most common reason for its performance (malignant disease) and from the close manner in which the duodenum is bound down to the abdominal wall, much more difficult to perform than on a part of the bowel with an extensive mesentery, such as we had to deal with in the present instance. These operations, therefore, may be regarded as belonging quite to a different category. But the cases that I have met with which come nearest to mine are two recorded by Professor Edward von Wahl of the Dorpat Hospital, in the *St Petersburger Medicinische Wochenschrift*, and referred to in the *British Medical Journal* for May 1883, p. 1015.

These were, a case of resection in which two and a half inches of intestine were removed, and the opposing ends brought together with a single row of catgut sutures, in order to cure an artificial anus. In this case the patient died on the third day from peritonitis, in consequence of two of the sutures becoming loose. The part removed proved to be a portion of the transverse colon.

The other case was one in which Professor Wahl, finding intimate adhesions between a dermoid cyst and the ascending colon, preferred to remove the portion of colon rather than separate it from the tumour. The reason assigned is that the tumour was already, especially along the line of adhesion, undergoing malignant degeneration. In this case a double row of sutures were employed, one set embracing the mucous membrane and the muscular wall, and the other bringing the serous membranes into contact. This case did well for a month, and then went to the bad, apparently from malignant disease. It is clear, however, that the union of the bowel surfaces had been complete, a result which appears to me to have been essentially due to the increased number of stitches employed.

But I will not weary you with any further remarks on this case. After the fact, I have several things to regret, more especially, 1*st*, that I did not examine the exact state of the uterus and ovaries; 2*nd*, that I did not retain the excised portion of bowel. But this cannot now be helped, and must be endured.

I now proceed to consider—

Case II.—Mrs S., æt. 29, residing in Edinburgh, was admitted to Ward XXXIII., Royal Infirmary, on 7th October 1882, and removed to Ward XXVIII. on 10th October.

The patient complained of much abdominal pain and tenderness, cessation of menstruation, and morning sickness. She has been twice married, the first time eleven years ago. Her first husband having died in December 1881, she married a second time three months ago. Since her marriage she only menstruated once, viz., ten weeks previously to admission. Her menstruation up to this time had been regular. She never was pregnant during her first marriage, and menstruated regularly. The only exception to her uninterrupted good health occurred four years ago, when working in the fields as an outdoor worker. She then, on lifting a heavy basketful of potatoes, was seized with a severe pain in the left side, more particularly in the left iliac region. Though suffering great distress, she continued to work that day, but was confined to bed for the next six weeks with what was called inflammation of the bowels. When this illness began she was menstruating, and she states that the flux was arrested by it for the time.

About a month previous to admission she began to have morning sickness and vomiting, with pains over the lower part of the belly. Since that period the pains have been present with varying intensity, but they have become latterly more general over the abdomen. On the day preceding her admission, about eight o'clock in the morning, when walking about in the house, she experienced a violent pain in the left iliac region, so severe, indeed, that she fainted and was for a time insensible. On regaining consciousness she became sick and vomited, and heard ringing sounds in her ears, the pain being now general over the abdomen. On the day of admission she again fainted, and was insensible for a time; and in consequence of the alarming nature of her symptoms she was removed to the Royal Infirmary. During those two days she had become very pale in colour. Her temperature on admission was 98°, and pulse 106.

On 8th, morning temperature was 98°·5, evening 100°·2; pulse 108; bowels moved once.

On 9th, temperature in morning was 99°·8, evening 100°. She passed 20 ounces of urine, and had 20 minims of spirits of chloroform administered on account of the abdominal pain.

On 10th I saw the patient in Ward XXXIII. at Dr Wyllie's request, and examined her, with the following results:—Considerable tenderness over the abdomen, especially over the lower half. Some distention and increased resistance, more particularly inferiorly, but no distinct resistant tumour can be made out.

On examining per vaginam, vagina short, uterus situated low down in the pelvis, outer os very small; vaginal portion of the cervix is short, but not softened.

Anteriorly and to the left the inlet into the pelvis is blocked by an ill-defined, soft, and partially resistant mass. Centrally it is firm and decidedly resistant. But this firm portion appears to be the fixed body of the uterus. The uterus is not completely and is not apparently enlarged. Behind the uterus nothing is to be felt. Per rectum an ill-defined fulness or soft mass can be felt towards the left side of the pelvis high up.

The patient was that afternoon removed to Ward XXVIII. The evening temperature was 100°. There was retention of urine, in consequence of which the catheter was passed and 40 ounces of urine withdrawn.

11th Oct.—Morning temperature 100°·6, evening 101°; pulse 120. The patient had again retention of urine, 30 ounces being removed by catheter. Much pain during night. Ice-bags were applied to abdomen, and one-third of a grain of morphia administered per rectum.

The breasts are observed to be prominent; areolæ partially developed, mammillæ prominent, covered with a scaly crust. Some sero-lactescent fluid can be squeezed out from both nipples. This, when subjected to microscopic examination, is seen to be composed of minute shining points, and numerous colostrum corpuscles. The vulvæ present no extra pigmentation.

12th Oct.—There has been a slight amount of sanguineous flow last night. The mass on left side of abdomen feels more firm and defined. Measurement from umbilicus to anterior superior spine of left ilium is 7 inches; to anterior superior spine of right ilium is 6¾ inches. Circumference at umbilicus 32¼ inches. The abdomen is tender on pressure over its lower part, but there is little, if any, tenderness above a transverse line passing through the umbilicus. The tenderness is greater on the left than on the right. The percussion note is resonant in the mesial line down to a point 1½ inch below the umbilicus; below that point the note is duller, but not absolutely flat. Both flanks give a resonant note. In the left groin, to a height corresponding with that noted regarding the mesial line, there is some dulness, but above that position the note is specially clear. There is some dulness on the right side. The patient's appearance is markedly anæmic, the conjunctivæ being quite bloodless. A venous hum is heard in the veins at the root of the neck.

For the next six days the patient remained much in the same condition. The morning temperature varied from 98°·8 to 100°·4, and the evening from 100° to 101°·4. There was a good deal of pain complained of, especially at night, and the bowels remained constipated. The patient was able to pass her water voluntarily. On 16th Oct. an enema was administered, but no movement of the bowels followed.

17th Oct.—The temperature was, morning 98°·8, evening 100°; pulse 100. The abdomen is much less distended, but the dulness on percussion is markedly more pronounced. Per vaginam, on the left side of the uterus there is now a very distinct resistant tumour to be felt, which appears to extend behind the uterus. The sound enters 2½ inches, and causes no pain nor discharge of fluid. The patient had some sickness in the morning.

18th Oct.—Passed a good night on the whole. Evening temperature 100°·4; pulse 114. Had more abdominal pain in the morning, for which a suppository of gr. ¼ morphia was administered.

19th Oct.—Had another enema to-day, and a free motion after it. Temp. 100°; pulse 100. Feels better. There is now a distinct, rounded, smooth tumour to be felt along the lower part of the abdomen. Its upper margin can be distinctly felt a little below the umbilicus. It fills the lower part of the abdomen completely, but not tensely.

The patient continued to improve from that date. Her appetite got better, her temperature became normal, and her bowels acted regularly. Her general appearance underwent a corresponding improvement.

On 17th November the following note was taken:—A distinct hard tumour can now be felt occupying the entire abdomen from the umbilicus downwards. There is no pain complained of on gentle pressure over the abdomen. It is impossible to decide with certainty whether the tumour is attached to the abdominal wall or free from it. The tumour is fixed in the pelvic inlet, which is completely occupied by it. On the left of the uterus, and slightly so behind it, there is a feeling of a tender, elastic, cushiony, but thin mass in front of and movable over the surface of the hard mass. To right and left of the uterus, and also anteriorly, this feeling is not present, and the examining finger impinges at once on the hard tumour, the ordinary tissues only coming between the finger and the tumour. Posteriorly the tumour does not extend lower than the external os uteri. Fluid squeezed out of the breasts is shown by the microscope to be made up of true milk with well-developed milk-cells.

The patient felt so well that she insisted on leaving the Hospital on the 13th January 1883, before the tumour was completely absorbed, if, indeed, it has entirely disappeared. It was then, however, nearly entirely confined to the left posterior upper part of the pelvis, and only extended about an inch above the brim.

Throughout the case the treatment adopted was the continuous application of an ice poultice over the abdomen, the maintenance of very strict rest, and an occasional morphia suppository at night when the pain necessitated it.

This case I have all along regarded as one of a tubal gestation, bursting about the beginning of the third month, and giving rise to an enormous hæmatocele directly threatening life.

It is, of course, subject of doubt whether this case really was due to the bursting of an extra-uterine gestation. But, short of a post-mortem examination, it appears to me that we could hardly have more convincing evidence, with the sole exception of the absence of uterine enlargement. There was amenorrhœa in a woman in good health, living with her husband, and who had heretofore been regular in her periods. There was, further, morning sickness and vomiting, with pains in the region of the left tube of a recurrent character. Then there was the sudden attack of excessive pain, with symptoms of acute anæmia and collapse and other unmistakable evidence of great internal hæmorrhage. There was also enlargement of the breasts, which were proved to contain milk, and there were changes in the mammillæ and areolæ, all indicative of early pregnancy. Even when the woman was able to leave the hospital there was evidence of some sacculated material in her pelvis, rather than that of simple hæmatocele. Of course, there was doubtless a hæmatocele of unusual proportions present also.

We have not been able to trace the patient's subsequent history, so as to ascertain whether the changes in the fœtus and its sac, which we presume were present, gave her further trouble. The truth is, I believe we are bound to revise our views in regard to extra-uterine pregnancy, and to include in that list a considerable number of cases that are now regarded as simple hæmatoceles from rupture of some vessels in connexion with the pelvic peritoneum or pelvic viscera, apart from pregnancy.

In another case that I watched carefully lately, I looked upon the bursting of an early tubal pregnancy as the most natural causation for the hæmatocele.

In still another case, at present under my care in Ward XXVIII., there is presented a curious sequence of events. The patient does not appear to be at all a Susannah, so far as one can judge. Indeed, she is a good deal of a hospital bird, at one time patronizing Professor Simpson with her attentions, at another me. In the month of June last year she applied at the Infirmary for admission. I examined her then, and found nothing materially wrong, and refused her admittance, making the observation, which was written down at the time, that both ovaries could be felt and were both normal.

Some time subsequently she again applied for advice, when I noted that in the situation of the right broad ligament, close to the uterus, there was a movable tumour which could be felt separate from the uterus, was oblong in shape, and about the size of a hen's egg. We could not give the patient admission at this time for want of accommodation.

In the month of August the same patient was recommended to Ward XXVIII. by Dr Barbour because of a well-marked hæmatocele. For this she was treated in Ward XXVIII., and went out in September well. It is important to note that for two months before the hæmatocele appeared the patient had not menstruated. The other day she applied and was re-admitted, complaining of some bladder irritation, which is her favourite complaint, though nothing pathological can be made out affecting that organ.

I examined her again carefully, and found, in close relation to the uterus on its right side, a firm, hard nodule, smaller than the right ovary ought to be, and harder. Besides, it is closer to the uterus than the ovary ought to be. I did not feel the right ovary. The left is large and soft, but not tender. In the fold of Douglas there is observed a slight stringy deposit, the only remains of the recent hæmatocele.

Now, from the history I almost think this woman had suffered from rupture of an early ovum in the right tube, of which the hardened tissue mentioned above is the remains.

But be this as it may, I hold that Dr Freund's observations and my own experience combine in compelling me to the conclusion that extra-uterine pregnancy is more frequent than we ordinarily think and than is usually diagnosed.

I leave to the other members of the Society the discussion of the many important points in regard to etiology, diagnosis, and treatment so ably brought forward by Dr Freund. I merely content myself with affirming that his view as to the alantois being the element which conditions an irritation sufficient to develop a tissue corresponding to the maternal placenta is, of all the various explanations of the possibility of finding means of nutrition and position for an extra-uterine pregnancy, the most natural and convincing.

I would also like to urge, with Mr Lawson Tait and others, that the treatment of extra-uterine pregnancy by abdominal section ought to be more thoroughly tested. At the same time, in abdominal cases, even when the pregnancy has advanced to full time or near it, I am inclined to agree with Litzmann when he says that experience indicates to us that our action ought mainly to be regulated with a view to saving the mother and not the child, as the children, even when carried to full time, are usually found to be so deformed and imperfectly developed as to be only seldom capable of being reared.

In cases of abdominal pregnancy, therefore, it seems to me that the operation ought to be delayed, if that is possible, for many weeks, or even months, after the death of the fœtus, so as to make certain that there is thrombosis of the placental vessels, and thereby avoid the occurrence of serious hæmorrhage from the placental site, which is the most important risk in the majority of such cases, when one has no uterine muscle to trust to for the arrestment of the bleeding.

III.—CASES OF SPONTANEOUS RUPTURE OF THE HEART IN THE INSANE.

By Arthur Fflintoff Mickle, M.B., Kirklington, Yorks.

Case I.—A. B., clothworker, aged 66. This patient was a short and rather lightly built man, with dark gray hair, a sallow complexion, and of bilious temperament. Twenty-seven years ago he unfortunately became melancholic and had delusions, and since then has spent the greater part of his life in an asylum. He usually enjoyed fairly good health, and there is no history of any serious illness, nor had he any symptoms that would lead one to suppose he had any cardiac lesion. An examination of the chest a few months previous to his fatal illness, discovered a diffused apex beat and faint cardiac sounds; the first sound was also impure, and the second accentuated, especially in the pulmonary area.

On the 10th of January last—previous to which he had been in a fair state of bodily health, and occupied daily with light work—he complained of precordial pain, oppression of breathing, and a fainting sensation. On examining his chest the apex beat was found diffused, the impulse weak, and the cardiac sounds were very faint in all regions; the first sound was also impure, and the action was irregular. The pulse was weak, compressible, of small volume, and irregular. As he felt faint and appeared to be seriously ill, he was ordered to remain in bed, where he had been sent as soon as he complained of feeling so unwell, and had light nourishing diet and an anodyne draught given him. After a while he rallied a little; the precordial pain abated somewhat, and the difficulty of breathing was not so great, and he took a sufficient quantity of liquid food during the day. There was no further change until half-past five next morning, when he became extremely faint, and was soon in a condition of collapse: the respiration was embarrassed and sighing, the cardiac sounds were very faint and the action irregular, the pulse weak and fluttering, the face had a death-like pallor, he broke into a profuse and cold perspiration, the extremities soon became cold; and all these symptoms gradually becoming intensified, he died in the course of two hours.

Post-mortem.—On opening the pericardium a small quantity of clotted blood and some serous fluid were found. An examination of the heart revealed, near the centre of the left ventricle, a discoloured patch about two inches long and an inch broad, having the appearance of a contusion. On looking more closely it was found that the ventricular wall in this discoloured area was considerably damaged, being, in fact, torn and infiltrated with blood, and a vertical section of it showed bundles of muscular fibres and layers of blood-clot alternating with one another. Though there was no actual rent in the ventricular wall, yet it was so much injured that blood could readily extravasate. The injured ventricle contained some blood-clot, and its walls presented a mottled appearance; in some parts there were brownish-coloured patches, and in others, where the degenerative process was more advanced, a yellowish tinge prevailed; its consistence, also, was much diminished, for it was very soft and friable, and had a somewhat greasy feel. The coronary arteries were slightly thickened and showed signs of degenerative changes, and there were a few yellow, opaque, elevated patches on the inner surface of the commencement of the aorta. These were distinctly fatty changes, and the patches could easily be scraped off. Both aortic and mitral valves were slightly thickened. The right ventricle was also affected, but in a minor degree. The lungs were congested posteriorly, and the liver was fatty. The anatomical appearances of the brain and other viscera presented no features of special interest.

CASE II.—M. N., aged 70. This was a moderately nourished but feeble old woman, with gray hair and blue eyes; she had a vacant facial expression, and was in a state of senile dementia. I could not obtain any definite history of this patient, but understood she had always enjoyed fairly good health, and had not suffered from any serious organic disease. An examination of her chest some weeks prior to death revealed nothing very remarkable; the cardiac action, however, was noted as being weak and the sounds faint. As she was an old woman, and in a state of dementia, she had not done any work nor exerted herself in any way for months previous to her fatal illness, which came on very suddenly in the following manner:—Whilst reclining on a couch she was seized with sudden and severe pain in the region of the heart, extreme dyspnœa, collapse, and died in the course of a few minutes.

Post-mortem.—On opening the pericardium a large clot of blood was found, and on removing this there was seen in the wall of the left ventricle a very irregular rupture with jagged edges, infiltrated with blood, and running parallel with the direction of the chief muscular fibres. The heart was empty, and looked small and flattened. The ventricular walls were of a pale brown colour, and presented the characteristic faded-leaf tints or thrush's-breast appearance; they were also soft and friable. The carneæ columnæ were mottled with fattily degenerated spots. The right ventricle was not nearly so much affected as the left. The lungs were somewhat emphysematous and congested posteriorly. The liver presented appearances of chronic congestion. There was nothing further worthy of note.

CASE III.—S. C., æt. 70. She had suffered from melancholia for years, and had become somewhat demented. She was a rather thin woman of average height, with gray hair and eyes, and a tolerably healthy-looking complexion, and of no marked temperament. In her youth she had an attack of inflammation of the lungs, and six or seven years ago had another illness, when she had swelling of the feet, legs, and face, and convulsions; and I think these symptoms may be attributed to renal disease. Some months before her death, when her chest was examined, it was noted that there was distinct pulsation in the scrobiculus cordis, that the area of cardiac dulness was increased, that the apex beat was diffused and feeble, and the sounds faint; the pulse, also, was small, feeble, and compressible. She, however, enjoyed tolerably good health for a person of her age, and on the day preceding her sudden death nothing unusual was observed in her bodily condition. In the morning, and just when about to get up, she was suddenly seized with pain in the cardiac region, gasped for breath, and rapidly became insensible and expired.

Post-mortem.—The pericardium was found filled with dark blood, and on removing it there was found in the wall of the right ventricle a very distinct and jagged rent about an inch and a half long, and running in a direction from base to apex. The ventricle was considerably dilated; the walls were thin, and presented the usual appearances of advanced fatty metamorphosis. The left ventricle was hypertrophied and showed signs of fatty change, but in a less advanced stage. The liver and kidneys were undergoing fatty changes. The other organs presented no interesting pathological changes.

Microscopic Examination.—The striæ of the muscular fibres were lost or indistinct, and granules of fat and oil globules were seen in abundance. In a word, the specimens presented the usual characteristic appearances of fatty degeneration.

I must apologize for the incompleteness of my notes, both as regards the history of the cases, the physical signs observed previous to illness, and also the post-mortem appearances; but, such as they are, I venture to hope they may possess interest for some of your readers, and would draw attention to the following points of resemblance in the three cases:—Thus in all three patients the rupture occurred spontaneously; not one of them was making any undue exertion when the accident happened; all three had been for many years insane; they were all nearly the same age—two were 70 years old, and the other 66—and in none of them were there any special symptoms of fatty degeneration of the heart. In two of the cases there was no history of any predisposing cause of fatty disease, except insanity; but the other, S. C., had suffered from renal disease, and in this case the rent was found in the right ventricle, where it is most exceptional for spontaneous rupture to occur.

Such cases as the above, I think, present very distinct evidences of how insidiously degenerations of a grave character may progress in the insane, and yet not produce any special symptoms to attract our attention. They also should strongly impress upon our minds the necessity of insisting on the most gentle treatment of all persons suffering from mental disease, whom we may suspect of being subjects of degenerative changes in the circulatory system. Had one of these patients been very obstinate and troublesome, and resisted nearly everything it was necessary should be done for him, —take, for instance, forced alimentation,—and rupture of the heart occurred whilst the patient was in the hands of attendants, though using no unnecessary force, or in the act of being artificially fed with the stomach-tube, the result would not have been very pleasant to contemplate.

IV.—CAUSES OF DEATH.

By John Haddon, M.A., M.D.

Having kept the counterfoil of the certificate of death, I am able to look over all the deaths with which I have met during eleven years of general practice in a suburb of a large town in England. The retrospect points out some facts which may be regarded as of general interest.

Altogether the deaths number 175, giving about 16 for each year. There were 94 males and 81 females. The following table of some of the common causes of death shows the number of deaths, and the proportion which the males bore to the females in each case.

Disease.	No. of Deaths.	Males.	Females.	Sex not noted.
Phthisis, .	. 17	3	13	1
Pneumonia,	. 17	9	8	0
Meningitis,	. 16	12	3	1
Bronchitis,	. 13	6	7	0
Cardiac, .	. 11	5	6	0
Scarlatina, .	. 9	3	6	0
Typhoid, .	. 9	5	4	0
Measles, .	. 4	3	1	0
Smallpox, .	. 4	0	4	0
Erysipelas,	. 3	1	2	0
Diphtheria,	. 2	2	0	0

The following points seem worthy of note:—

1. That diseases of the lungs cause 35 per cent. of the deaths, while all the infectious diseases put together cause only 27 per cent. of the deaths; and yet it is on the subject of the infectious diseases that the health officer and the public are most anxious. It may be that if diseases of the lungs were notified, and their etiology as carefully studied as that of infectious diseases has been, some startling but useful inferences might be arrived at as to the clothing and housing of the people.

2. That for every male that phthisis killed, it killed 4 females.

3. That pneumonia caused 17 deaths:—

8 one year or under (catarrhal);
3 between 30 and 40;
3 „ 40 and 60;
4 „ 60 and 92.

From such figures we may infer that catarrhal pneumonia is very fatal to infants.

4. That bronchitis caused 13 deaths, of which 3 occurred below 6 months of age, and the rest between the ages of 54 and 81 years. The conclusion that bronchitis is seldom fatal except in advanced years, seems fully warranted.

5. That meningitis caused 16 deaths, of which no fewer than 12 were males. Unlike phthisis, this disease appears to kill 4 males for every female:—

6 about or below 1 year;
4 between 2 and 3 years;
1 at 6, 7, 13, 49, and 58 years.

Thus it would appear that up to the age of 3 years, meningitis is a common cause of death.

6. That cardiac diseases caused 11 deaths, amongst which are included 2 cases of ulcerating endocarditis.

7. That although cases of pleurisy and acute rheumatism were commonly met with in practice, they do not occur among the causes of death, from which we may infer that these diseases are by no means frequently directly fatal.

In conclusion, I am aware that mistakes in diagnosis will occur, and that I have but few cases from which to generalize; nevertheless, knowing the great doubt as to diagnosis which shrouds the registrar-general's returns, I venture to submit this as my contribution to the literature of a subject which will be of importance so long as man is an inhabitant of this earth.

V.—A CLINICAL ACCOUNT OF SMALLPOX.

By James Niven, M.B., M.A. Cantab., Fellow of Queen's College, Cambridge.

(*Continued from page* 620.)

Digestive System.—Aphthous patches occur on the mucous membrane of the mouth, but rarely. The tongue sometimes swells enormously about the end of the first week of the disease. These patients almost invariably die. In two cases, however, one in smallpox and one in scarlet fever subsequent to smallpox, severe glossitis was followed by recovery. The following gargle seemed to produce a marked effect:—

Acidi tannici, ʒij.
Liquoris opii, ad ℥vj.

In some very confluent cases, the condition of the mouth, the swelling of the tongue, and, to a less extent, of the mucous membrane of the cheeks, the palate being covered with confluent vesicles, and later on with *débris*, offers a serious obstacle to the taking of food. In hæmorrhagic cases the inside of the mouth looks sometimes as if it had been charred. The tonsils are generally somewhat affected, and in some severe cases may be quite destroyed. Occasionally they get covered with adherent white membranes. These cases die.

The Pharynx.—Supposing a patient to die about the tenth day of the eruption of confluent smallpox, the pharynx will be found covered with little pits and *débris* of cast-off material, worm-eaten and raw. This condition reaches down to the œsophagus, into which it does not extend. In some cases it does not exist. It is always present when dysphagia has been complained of.

The stomach and bowels are not apparently affected in this disease. Constipation is the rule, and has to be relieved by medicine. Occasionally diarrhœa occurs of a troublesome nature; this is very rare. What diarrhœa there is is usually easily checked by opium and tannic acid. Sometimes diarrhœa occurs and persists, in which case you look for some other cause than smallpox. In one of these cases there was cancer of the bowel. In another case, a woman who died of variola hæmorrhagica pustulosa, there was diarrhœa for several days before death. An enormous cancerous mass quite filled the pelvis, freezing in the rectum—which admitted a wire of the thickness of a quill,—the uterus, and the bladder. She had not been quite well for some months, had suffered from diarrhœa, but had not thought it necessary to consult a doctor! She died a comparatively easy death.

This is a point of considerable importance, as in scarlet fever of a severe type, and leading to early death, diarrhœa is a not infrequent occurrence, and post-mortem examination invariably reveals considerable enlargement of the mesenteric glands. There is also in these cases generally enlargement of Peyer's patches, and inflammation of the mucous membrane of the stomach and bowels. The mesenteric glands are not so affected in smallpox.

With reference to the remarkable case of cancer I have mentioned, it is worthy of remark that I saw a similar case in Dr Humphry's clinique at Cambridge some six years ago. A large cancerous tumour had invaded the back of the bladder and the rectum, and a communication had existed for some time between the bladder and the rectum. Yet this patient had suffered comparatively little, and continued at his work.

Again, recently, at a post-mortem of one of Dr Walker's cases, where till within a month or two of death symptoms had been slight and pointed to indigestion, an enormous mass of encephaloid cancer occupied the place of the omentum, and so contracted and surrounded the stomach that it was with some difficulty we found it.

In a small proportion of the cases of variola hæmorrhagica pustulosa and variola hæmorrhagica, hæmorrhage occurs into the stomach and intestines, and is attended with vomiting of blood and defecation of grumous material.

The Respiratory Organs.—As we have seen, laryngitis, in confluent cases, is a common cause of death. There is œdema glottidis and inflammation of the mucous membrane, also inflammation in the immediate neighbourhood of the true vocal cords. Sometimes eruption can be distinctly made out on the mucous membrane, but in any case *débris* of cast-off mucous membrane collects there and narrows the air-passage. The cords are sometimes quite free. Generally the thin membrane covering them is thickened; and occasionally there is a pretty thick false membrane over the cords themselves. Sometimes when the larynx is examined, the glottis seems choke-full of stuff, and yet the cords may be themselves comparatively free. Œdema glottidis is rarely excessive. The same appearances present themselves in variola hæmorrhagica pustulosa. Laryngitis is infrequent in discrete cases, and, when it occurs, generally ends in recovery. It is probably owing to one or two pocks seating themselves on or close to the vocal cords. In confluent cases it is nearly always fatal. A small proportion of cases recover, however, when put close to a good fire, screened, and steamed. Cricothyroidotomy and laryngotomy have been tried, and, so far as I could gather, with little success. It is, of course, possible to make good results by operating on cases which would in any case recover. I operated on one case, a girl æt. 10. She had had laryngitis for two days, and was rapidly getting worse. She died within twelve hours after operation. The tube was in good position and free from *débris*. Both lungs contained many infarcts the size of a pigeon's egg, solid, yellowish-white, and surrounded by zones of pneumonic tissue. I am inclined to think that if I had operated sooner she might have recovered. It is obvious, indeed, that the operation, if it is done at all, should be done early, and after careful examination of the lungs; for the lungs are a favourite position for assault. In a small proportion of mild cases, and in the majority of severe cases, there is some bronchitis. In discrete variola recovery almost always results. In severe cases which have died we generally find, on post-mortem examination, extensive and severe bronchitis. On the upper part of the trachea mucous pocks are to be seen, but not on the bronchi. In discrete cases, pleurisy, though very rarely, occurs, but soon passes off.

In one case there was double pneumonia, in the lower lobe on the right side, in the upper on the left, with effusion of recent lymph on the right side. In confluent cases we occasionally find collapse of portions of the lung; generally we find congestion of the bases, and often there is a considerable amount of broncho-pneumonia over the lower bases.

It is in hæmorrhagic cases, however, that the incidence on the lung is most marked. In one case of variola hæmorrhagica pustulosa, both lungs were quite solid and hard with cheesy masses, a condition which must have occurred in a day or two. In variola hemorrhagica pustulosa, broncho-pneumonia is the rule, and it is frequently extensive. Distinct hæmorrhage into the lungs is rare. This suddenness of incidence, however, is not confined to the hæmorrhagic form. For example an adult male patient, ill of confluent smallpox, suddenly got much worse one morning. His breathing, which before had been good, was rapid and pneumonic. By night he was dead. There was extensive broncho-pneumonia over both lungs, the lower lobe of one lung being quite solid. Pleurisy, I think, is, as a rule, the result of pneumonic changes. I have seen one case of empyema follow smallpox. It is but natural to connect the marked tendency to broncho-pneumonia with the condition of the larynx above described, though I have not been able, on dissection, to establish such a connexion. It would be difficult, however, to make out the laryngeal *débris* in the bronchioles. We must bear in mind the partial occlusion of the larynx and the weakness of the patient.

Peritonitis is exceedingly rare. I have seen one or two cases, but doubt whether smallpox had anything to do with it.

Lobar pneumonia occasionally comes on during convalescence, but has no integral connexion with the disease, such as broncho-pneumonia has. I have seen two or three cases of apical pneumonia occur in connexion with smallpox. They died.

Heart.—The heart is sometimes large and softened post-mortem, but smallpox does not seem to lead to any cardiac affection, nor does heart disease appear materially to affect the course of the disease.

Veins.—During convalescence phlebitis sometimes comes on. Several times I have seen it in the femoral vein, and once in the veins at the back of the knee. The course of this complication was the ordinary one.

Lymphatic Circulation.—The deeper cervical glands are in severe cases found, post-mortem, very large. It would seem to be particularly those connected with the œsophagus and larynx. They are not felt from the surface during life.

Nervous System. — In addition to delirium, other nervous symptoms are occasionally present, such as tremors, subsultus tendinum, and even jactitation of the limbs. They are rare, and, when present, do not necessarily imply that the case will be fatal. Urine may be retained, but in all the cases I have seen it suffices to give the patient gin to relieve this. The fæces and urine are sometimes passed involuntarily. One woman, thought by her husband to be drunk, lost speech and power over her extremities with the onset of the disease. She recovered, and was speaking intelligibly and could walk a little when discharged. Her face had assumed a vacuous expression, but she seemed perfectly intelligent. Another patient, a woman who suffered from left hemiplegia and loss of speech at an early stage of the disease, died. There was a large sheet of clotted blood over the whole of the right hemisphere, lying between the dura mater and the cerebrum, also some slight hæmorrhage on the left hemisphere. I do not know whether she was left-handed. In patients who died early with acute delirium or nervous breathing, etc., there was generally marked congestion of the surface of the brain, and to a less extent of its surface.

Supporting Skeleton.—Occasionally, but very rarely, affections of the joints occur. I have seen two well-marked cases of hip-joint disease follow smallpox. The temperature was not high in either, and soon became normal. They were very obstinate cases. Where the patients are exposed to currents of cold air, joint affections are much more common. Necrosis of bone resulting from smallpox is very rare. I have extracted a digital bone that had so necrosed, and in another case the acromion process and part of the scapular spine was removed.

Affections of the Cellular Tissue, etc.—After boils and eye affections, the most common complication of smallpox is facial erysipelas. In the third or fourth week from the commencement of the eruption a convalescent begins to get feverish and nauseated, and in a day or two to suffer from pains in the back of the neck. In three or four days, perhaps more, from the commencement of symptoms a patch of redness appears on one cheek and rapidly spreads over that side of the face, or it may involve the whole face and scalp. The temperature is taken, and found to be 103°–104°; it remains high for three or four days, and then goes down rapidly, at the same time that the swelling declines. The urine is often albuminous, but this disappears with the defervescence of the disorder. This affection appeared to be infectious, but not highly so. It is to be distinguished from an erythematous condition of the face resulting from exposure to cold. The erysipelas above described comes on during convalescence, and is to be distinguished, also, from the cellulitis that occurs in some confluent cases during the pustular stage, and occasionally causes enormous enlargement of the scalp, face, and neck. The latter ends in death.

Erysipelas faciei occurs in discrete cases, though not with the same frequency as in severe cases. Occasionally even in fairly mild cases large hard lumps appear beneath the angle of the jaw, and more rarely beneath the sterno-mastoid. As a rule they require no interference, and rapidly subside. They are therefore probably enlarged glands. Though not frequently, yet in some severe cases, extensive cellulitis occurs in the extremities. In one such case, in a boy æt. 7, during convalescence the right thigh got enormously swelled, and ultimately extensively sloughed. After about a fortnight's illness he died with symptoms of pyæmia. Unfortunately there was no necropsy.

In another case, a young man æt. 17, extensive cellulitis of the left thigh, with numerous boils, ended in recovery. Another case, a woman, who had cellulitis of one leg, died.

Several matters hitherto omitted may now be described in connexion with what one sees in the post-mortem room. If we take a confluent case in which death has occurred early, say about the sixth or seventh day, we find that the liver is congested, the spleen slightly enlarged and of normal consistence. The kidneys are somewhat congested. If the patient has died during the purulent stage, the liver is larger, not congested. The spleen is also large and soft, the Malpighian bodies standing out conspicuously. The kidneys are also generally above their normal size. Sometimes, though rarely, they are in a distinctly catarrhal condition, the cortical portion being much enlarged and pale, the papillæ congested. In some of these cases there is well-marked albuminuria during life. The bowels are normal.

Post-mortem of Hæmorrhagic Cases.—Occasionally during life hæmorrhagic cases of smallpox pass blood from the bowels and in the urine, and in the case of females blood issues from the vagina, metrorrhagia occurring at the normal period of the menses. Frequently bloody matter is coughed up, though often this comes from the throat.

When we open the body of a patient who has died of hæmorrhagic smallpox, we find that the organ principally affected is the kidneys. There is generally blood in the pelvis of the kidneys, which themselves are congested. There are also generally hæmorrhagic patches underlying the capsule, ranging in area from a split tare to a shilling; and very frequently, too, there are extensive hæmorrhages into the cellular tissue surrounding the kidneys, reaching away down into the pelvis, along the subperitoneal tissue.

Again, hæmorrhage beneath the pulmonary pleura is not rare, though not quite so frequent as about the kidneys, and hæmorrhage beneath the costal pleura is less common still.

Hæmorrhage into the lungs, causing collapse of la rarer, but does occur.

The most common occurrence in hæmorrhagic ca broncho-pneumonia.

Hæmorrhages occur not rarely beneath the pe beneath the peritoneum lining the bowel. They are size, averaging in area the flat surface of a split p sometimes is much congested and full of grumous

Hæmorrhage sometimes occurs on the surface of also from its mucous membrane, but this is a rare

Similarly hæmorrhages may occur on the subp surface, and, though infrequently, we may find the m of the uterus congested, and bloody matter inside t

Hæmorrhage on the surface of the spleen is not i liver is exceedingly rare. I have, however, seen tw where this had occurred. In a severe hæmorrhag may look with some degree of certainty for hæmorrha of the kidney, beneath its capsule, and into the c the loins and pelvis, also on the surface of the lung

VI.—A CASE OF SUICIDE BY PISTOL-SHOT EXTERNAL WOUND.

By **Frank Ogston**, M.D., Memb. Corresp. de la Société de
of France, etc., etc.

About three years ago I got an order from the Pr of Aberdeenshire to view the body of a man who, it shot himself with a navy revolver in a wood near careful examination of the body, however, gave no such was the case, as neither wound of entrance nor coverable, the external appearances being as follows:

Rigor mortis well developed. The front of the b back parts purplish, and purple (post-mortem) discol root of the neck. The expression of the feature pupils of the eyes normal in size. Two or three sligh the upper part of the left side of the forehead; crusts about the lower part of the face; and moist recent nostrils. The left hand smeared with dried blood. equally half closed. The penis semi-erect, with issuing from its orifice. The testes and scrotum retra skin on the outer aspects of the thighs.

As all this gave no indication of the cause of deat to exceed my remit, which was to make an external only, and proceeded to open the head and the cavity o when the case was made plain by finding the following which are quoted from notes taken at the time:—

quite uninjured. The
A blackened groove,
ran along nearly the
palati perforated by a
n diameter, exactly in
The basilar process of
·ration just in front of
ı traversed the medulla
.ıe occipital bone at its
:rance, had glanced off
side of the base of the
tricle, and issuing from
ı right frontal convolu-
spent, it had spun back-
was found in a mass of
· underneath the dura
ft side, near the superior

l, the bones of the skull
e quite uninjured. The
ıt its base retained still
identification, as it nearly
. it had been fired, which

shows the track of the

'HE GRAVID UTERUS;
S.

ate Senior Resident Medical
[anchester.

lexion of the impregnated
nt, while a few deny its
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pregnancy. Drs Tanner
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e—that published by Dr
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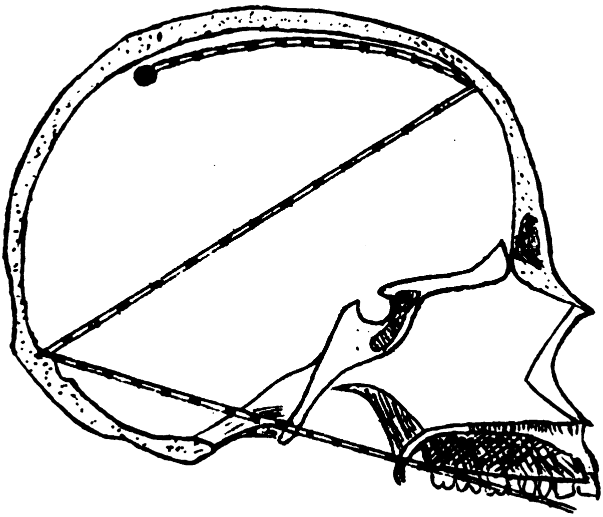
hall subsequently allude.
; my warmest thanks to
ng the following interest-



The lips, externally as well as internally, quite uninjured. The whole of the interior of the mouth blackened. A blackened groove, a quarter of an inch in breadth and depth, ran along nearly the whole dorsum of the tongue. The velum palati perforated by a round hole, nearly a quarter of an inch in diameter, exactly in the central line and near its lower margin. The basilar process of the occipital bone presented a similar perforation just in front of the foramen magnum. The bullet had then traversed the medulla oblongata, and, striking the inner side of the occipital bone at its thickest part, the internal occipital protuberance, had glanced off and run through the brain from the left side of the base of the cerebellum, traversing the right lateral ventricle, and issuing from the cerebrum between the third and fourth right frontal convolutions; then, apparently its velocity almost spent, it had spun backwards over the surface of the brain, and was found in a mass of bruised and broken-down brain matter underneath the dura mater, over the fissure of Sylvius on the left side, near the superior longitudinal sinus.

Beyond the perforations above described, the bones of the skull showed no mark of the bullet, and were quite uninjured. The bullet was battered almost out of shape, but its base retained still enough of its original form to admit of its identification, as it nearly fitted into the copper capsule out of which it had been fired, which was found in the revolver.

The interrupted line in the illustration shows the track of the bullet.

VII.—A CASE OF ANTEFLEXION OF THE GRAVID UTERUS; WITH REMARKS.

By WILLIAM BAIN, L.R.C.P. and L.R.C.S., Late Senior Resident Medical Officer, St Mary's Hospital, Manchester.

MOST obstetricians are agreed that anteflexion of the impregnated uterus is an exceedingly rare displacement, while a few deny its existence. Churchill, in referring to it, says "that it is rarely seen, and can only occur when the uterus is about its normal size and in the cavity of the pelvis." Dr Playfair incidentally mentions it. Dr Leishman, in describing it, does not distinguish between it and anteversion, both of which he believes to be of rare occurrence in the early months of pregnancy. Drs Tanner and Meadows are the only authorities I have read that have at all attempted a description of it commensurate with its importance, and they each cite the same case—that published by Dr Ashwell—the only case on record occurring during the early months of gestation, and to which I shall subsequently allude.

I take this opportunity of expressing my warmest thanks to my partner, Mr F. W. Jordan, for placing the following interesting case under my care.

Mrs M., wife of a gardener, aged 25, was first seen by me on the evening of the 24th of June 1883. Patient has always been in delicate health. Frequently vomited her food. Menses appeared at 13. The flow was excessive, lasting six or seven days, and accompanied by severe pain in the back and loins. Has had one child. The labour was natural and "very easy." Convalescence was soon established. Six months ago patient had a miscarriage. No one attended her, but, owing to the profuseness and long continuance of the hemorrhagic discharge, she consulted by proxy her medical adviser, who prescribed some medicine which had the desired effect. About a week after the cessation of the hæmorrhage she began for the first time to suffer from leucorrhœa, which has continued, more or less, ever since. This discharge, although sometimes rather excessive, does not seem to have impaired her health. She was "unwell" twice after the abortion. Last menstruation occurred fifteen weeks ago. Since conception, and during the previous gestation, she suffered from morning sickness; otherwise she retained her usual health and strength.

Ten days ago patient was suddenly seized with a severe throbbing pain of an intermittent character over the upper part of the vulva. This pain lasted about three minutes, and recurred at intervals of ten minutes. If she assumed the recumbent posture she had entire immunity from pain; if she even sat down it was very trivial. She also had a feeling of weight, as if there were two tumours, one protruding from each side of the vulva. Patient cannot recollect what she was doing at the time of occurrence. Some days previously she had been washing, and had to keep in motion for a considerable time a very heavy wringing machine. Whilst she was thus employed she felt "as if something turned round in her inside." She continued to perform her household duties, although her condition was greatly aggravated thereby, until yesterday afternoon, when the pain and bearing down became so exaggerated that she thought "all her inside was coming out." She consulted Mr Jordan, who diagnosed the case, and advised rest in the dorsal decubitus. He prescribed a mixture containing morphia, the administration of which produced persistent nausea and severe headache. There was neither pain nor uneasiness on micturition, nor any difficulty in emptying the vesical organ, nor any symptom or sign whatever referable to that viscus, while the act of defecation at once determined the pain and bearing down. Immediately preceding my visit she got up to micturate, and while so engaged the pain, which had lain dormant during her recumbency, returned, accompanied by a severe aching in the sacral region, and continued with unabated vigour until reponement of the uterus was accomplished.

On examination a loud systolic murmur was heard in the mitral area, leading up to the second sound. The abdomen was not enlarged. Deep pressure in the left ovarian region elicited pain. Percussion revealed a slightly tympanitic condition of the bowels, the hypogastrium included. As soon as the finger engaged the vagina it impinged upon a globular mass pressing down the anterior vaginal wall, and lying between it and the bladder. This mass, which lay more to the left side than the right, was uneven in outline, with some irregular projections resembling fœtal eminences. On tracing the tumour upwards and backwards the finger arrived at a deep sulcus. A very little further the os uteri was easily recognised pointing towards the coccyx. It was rather difficult, at first, to define the limits of the sulcus; but after careful manipulation of the parts it was evident that the sulcus was the point where flexion of the enlarged uterus occurred, and corresponded to the junction of the neck with the body of the womb. The shape of the incarcerated uterus was somewhat similar to a chemical retort. Pressure on the fundus uteri caused severe pain and a peculiar hot, sickly feeling. The dependent part of the fundus reached almost to the vaginal outlet. The cervix was abraded and more elongated than natural. The os was slightly dilated. The pelvis was unusually large. Next day she complained that the pain and backache prevented her from sleeping. As her bowels had not been evacuated for two days, I ordered an enema, and, if the pain continued, half a grain morphia suppository.

June 26.—Rest not sufficing either to relieve pain or replace the dislocated uterus, reduction was resorted to. I put the patient in the knee-and-elbow position, and with two fingers of my right hand introduced into the vagina I subjected the fundus uteri to gradual pressure in an upward direction. This effected partial reduction, but I was unable to get the globular mass above the symphysis pubis. I now urged the patient to have chloroform; but she so strongly objected, and said she preferred to bear any amount of pain than have it administered to her, that I desisted from further importunities, and having placed her in the ordinary obstetric position, but lying nearly across the bed, I applied for some minutes, by means of two fingers of my left hand inserted into the vagina, firm and continuous pressure to the fundus uteri until it receded above the pelvic brim. Not having a pessary of any description with me, I stuffed the vagina with a handkerchief, so as to render a recurrence of the displacement impossible.

June 27.—Patient is still confined to bed, but quite free from pain. Being unable to pass water, the handkerchief had to be withdrawn and was not replaced. She was ordered to retain her urine as long as possible, so that the distended bladder might retain the fundus in its normal position.

June 29.—The pain over the vulva returned the previous night. On vaginal examination it was found that the fundus had again descended, but not so low down as at first. Reposition was easily effected, and without producing the hot, sickly feeling complained of before. I endeavoured by means of pessaries to render such support to the fundus as would prevent it from falling down again, but my efforts in this direction were completely futile. I first tried a No. 3 watch-spring pessary, placing it adjacent to the anterior vaginal wall; failing that, a large-sized Hodge, one bar resting on the perineum, and the other against the anterior vaginal wall. Graily Hewitt's pessary was too small—at least the sizes I had. Owing to the capaciousness of the pelvis, the weight of the fundus, and not having a pessary specially adapted for the displacement, it was next to impossible to combat the deviation with the ordinary gynecological appliances. I now pushed the fundus as far above the brim as I possibly could, and then introduced a speculum, and with a strip of lint, an inch in width and about a yard and a half in length, I packed the anterior cul-de-sac. The lint I previously soaked in glycerine. I then inserted my finger between the plug and the pubis, so as to remove any pressure from the urethra. I also introduced my finger between the perineum and the plug, so as to prevent undue pressure on the cervix. I then told the patient she might resume the erect posture.

July 1.—Patient feels very well. The plug caused no uneasiness. I removed it, and reintroduced another in exactly the same manner. The introduction of the plug did not give rise to any pain or discomfort, but withdrawing it caused irritation.

July 11.—Patient has been attending to her usual duties for over a week. The pseudo-pessary was replaced every second or third day. The glycerine produced a copious watery discharge, which kept her uncomfortable. To obviate this I substituted pledgets of cotton-wool for the lint, observing the same precautions in their introduction as I did with the lint, but did not saturate them with glycerine. I do not think it formed such an efficient prop as the other, and the odour on removal was very offensive. As the leucorrhœal discharge became excessive and the fundus remained above the brim, I did not replace the plug, but recommended astringent vaginal injections. When I called next day I learned that during the night micturition was frequent, and there was a difficulty in voiding her urine; also a small substance protruded from the vulva. On examination I found the fundus reclining on the bladder, and the substance proved to be a cystocele. Having raised the fundus from its abnormal situation, I introduced an inflated air-ball pessary, placing it in the anterior fornix, and told the patient to continue vaginal ablution.

July 18.—Patient removed the pessary two days ago. She feels very well. It is difficult or almost impossible now to detect the sulcus. The os is contracted. Leucorrhœa is diminished in amount. Enlargement of the abdomen is distinct. Dulness extends in the mesial line to within two inches of the umbilicus.

The tumour lies more to the right side. The uterine souffle is easily heard in the right iliac region.

August 6.—The patient quickened on the 22nd of July. The fœtal movements are distinctly felt on abdominal palpation and on bimanual examination. The abdominal intumescence reaches to within an inch of the umbilicus. The flexion has entirely disappeared. As there cannot be a doubt now of the diagnosis, it is unnecessary to take any more notes of the case.

As regards the causation of this rare form of uterine displacement, the theory advanced by Dr Tyler Smith with respect to retroversion of the gravid uterus is, I think, in the majority of cases, also true of anteflexion. We have every reason to believe that the patient, prior to conception, suffered from cervical endometritis, which undoubtedly is a fruitful source of flexions. If, as we assume, the malposition existed in a slight degree before impregnation occurred, we can quite understand the laborious exertion which the patient underwent increasing the incipient deviation. The unusually large size of the pelvis, I have no doubt, materially assisted in producing a flexion so acute. Relaxation of the uterine ligaments, falling heavily or from a height, jumping, and lifting heavy weights, might aid in its production.

The symptoms are due to the pressure of the dislocated pregnant uterus upon contiguous structures. In Dr Ashwell's case, bladder symptoms chiefly attracted attention; but in mine they were conspicuous by their absence, which can readily be accounted for by the position the uterus occupied in the pelvic cavity. Pain over the vulva, and bearing down, were prominent symptoms. The pain and hot, sickly feeling produced by pressure on the fundus uteri was, I think, due to the movements imparted to the fundus being propagated to a tender ovary. The fact that pressure in the left ovarian region elicited pain supports that hypothesis. Pain on defecation, sacral aching, a sinking at the epigastrium, and a feeling of general malaise, were complained of.

The diagnosis was not very difficult. The exaggerated sensation of bearing down, which compelled the patient to seek medical aid, at once drew attention to the organ affected, and rendered a vaginal examination indispensable. On vaginal touch an irregularly globular intumescence was felt behind the symphysis pubis. On gauging the size of this tumour, a groove was felt between it and the cervix uteri. Whether the groove was produced by the juxtaposition of this tumour (say an abnormal growth) and the cervical portion of the womb, or whether it was the point where flexion of the impregnated uterus occurred, was at first rather difficult to determine, but on carefully examining the parts it was clear that the cervix and the tumour were coalesced. We also had the accompanying phenomena of pregnancy to guide us in forming an opinion, such as cessation of menstruation, morning sickness, darting pains, and a feeling of fulness in the mammæ, Jacquemier's test, etc. To those who practise the revolting method of vaginal auscultation this displacement removes obvious obstacles for its due performance. The alternate relaxation and contraction of the uterine parietes, which Dr Braxton Hicks says is a certain indication of pregnancy, I failed to observe.

Regarding the treatment, Dr Tanner says, speaking generally, it will be better not to attempt reduction. I entirely dissent from that teaching. Dr Ashwell tried in vain to rectify the displacement, and I think Tanner has based his opinion upon Ashwell's want of success. I shall most unhesitatingly endeavour to effect reposition in all these cases, and I believe the sooner it is done the better. I shall go further, and ask, Is one justified in allowing a woman (suffering as did she whose case I have detailed) to be prostrated with pain and the dread of some impending danger, while we can most probably give her absolute relief by subjecting the misplaced uterus to appropriately applied pressure, a proceeding which may be adopted with impunity? Moreover, uterine displacements are frequently exciting causes of abortion, and I certainly think that premature labour is far more likely to occur from the uterus being detained in its constrained position in the pelvis than from our attempts at replacement. Before attempting to replace the uterus, the bladder and rectum should be emptied. To attempt reduction by placing in the vagina a caoutchouc bag distended with water would be unwise, as it would only compress the fundus against the pubic bones. I think manual aid alone will succeed in rectifying the abnormality. The patient should be placed on her left side and lying across the bed, with the knees drawn up towards the chest. Then, by means of two fingers of the left hand (with their palmar surfaces looking towards the pubis) introduced into the vagina, we gradually push the fundus uteri above the symphysis pubis. Should a first attempt at reposition fail, the patient ought to be put under the influence of chloroform, as it relaxes all the parts. The knee-and-elbow position would probably facilitate reduction, but this interferes with the administration of the anæsthetic. I cannot help thinking that pressure, judiciously applied, will in every case dislodge the uterus; but if reduction be impossible, and untoward symptoms supervene, we must have recourse to the artificial induction of premature labour, which can readily be accomplished, as the os is within easy reach. When the womb is replaced, I would recommend the introduction of a plug of lint, as I have described, to prevent subsequent descent of the fundus. An air-ball pessary might answer, and it has the advantage of being inserted with comparative ease; but I refrained from employing it on account of the pressure it would exert upon the cervix, especially as the os was somewhat dilated and the patient had previously aborted.

VIII.—MEDICO-LEGAL ASPECTS OF A CASE OF DEATH FROM HÆMORRHAGE OF THE RIGHT TEMPORAL ARTERY RESULTING FROM A WOUND INFLICTED BY A PIECE OF GLASS.

By Keith Norman Macdonald, M.D., F.R.C.P., Cupar-Fife.

Though no part of the body is so much exposed as the face is to injuries of different kinds, I am surprised to find that in none of the standard works on medical jurisprudence which I have consulted is any mention made of the great danger which necessarily attends wounds of the temporal arteries when neglected either through ignorance, accident, or design.

That very serious, complicated, and fatal consequences may ensue through either of these causes the following case well illustrates:—

On the 12th of April 1883, I received a warrant from the Procurator-Fiscal of Fife to make a post-mortem examination of the body of a man named John Dryburgh, a builder by trade, aged 41, who was found dead in bed in his own house at Kirkcaldy, under suspicious circumstances, on the previous day. The story related by the police was that apparent great haste was being made in arranging for the funeral, which, to say the least, was unusual, and from other information obtained suspicion was aroused; hence the necessity for an official inquiry.

At the autopsy, which was conducted twenty-six hours after death, I was assisted by Dr Henry Gordon of Kirkcaldy, who rendered valuable aid throughout, having been called in at an earlier stage to give an opinion as to the cause of death.

The small dark room on the ground floor in which the body lay was found in a state of some disorder. A twelve-ounce glass flask, vulgarly termed a "pocket pistol," was found in fragments under the grate, stained with blood, and this was shown to us as being the probable instrument with which the wound, presently to be described, was inflicted.

The body, which was that of a fairly well nourished, fair-haired man of medium height and about 41 years of age, lay upon a bed facing a small window, dressed in a gray flannel shirt and drawers, and covered over with a sheet.

There was a large quantity of blood upon the bed, his shirt was saturated with it, and it penetrated through two ticks and a mattress, and on to the floor; the whole amount of which was estimated at several lbs. There were also blood-stains at the head of the bed, on the pillows, and on the wall opposite to where the head was situated; a large patch one square foot in size was seen, which presented the appearance of having been recently washed.

An incised wound one and three-quarter inches in length was found at the outer angle of the frontal bone on the right side, one and a half inches above the right eye, which severed the anterior branch of the temporal artery and extended down to the bone, the edges of which were retracted and covered with coagula of blood.

There were also a patch of discoloration the size of a florin one inch above the right eyebrow, a bruised patch the size of the palm of the hand on the top of the left shoulder-blade, at upper angle of the scapula, and three small patches, each of the size of a sixpence, above the right nipple. The thighs and buttocks were besmeared with fæces, and the usual post-mortem decubitus existed on the posterior aspect of the body. Post-mortem rigidity was well marked. The face was pale and tranquil, eyes closed, nostrils depressed, lips slightly apart and exsanguine, with some frothy mucus about the mouth. A slight odour of alcohol was noticed about the body, and decomposition had set in, though not to any marked extent.

On making an incision across the vertex of the cranium the scalp was found absolutely bloodless, and on removing the skull-cap the dura mater appeared paler than usual, the pia mater presenting an almost normal appearance. The brain substance was rather anæmic, though the veins entering the convolutions of the hemispheres appeared congested, and numerous bloody points were seen on section, both in the cortical and white substance. Half an ounce of serum was found at the base of the cranium, lateral ventricles empty, choroid plexuses shrivelled, presenting a fringe of semi-distended bloodvessels. The medulla oblongata was slightly hyperæmic; cerebellum normal. No other change of any note.

On making an incision from the sternal notch to the symphysis pubis and opening the abdomen, the diaphragm was found arched to the level of between the fifth and sixth ribs, and on removing the sternum the pleuræ were seen to be firmly bound down by adhesions on both sides. The pericardium contained half an ounce of serum. Heart nearly empty; walls firm and normal; valves healthy.

Both lungs were studded throughout with carbonaceous deposits, the left being more firmly bound down by pleural adhesions than the right. A slight fatty and bloody mucus escaped on pressure after section, and about an ounce of dark fluid blood escaped when the large bloodvessels of the heart and lungs were severed.

The peritoneum was healthy. The stomach and intestines were inflated with gas, and nearly empty.

The liver was enlarged, and presented a peculiar and characteristic appearance—evidently in the first stage of cirrhosis. It was of a steel-gray, or rather leaden hue, showed numerous nodulated projections on its anterior surface the size of filberts, and under the knife felt gristly and unyielding. There were no scales and weights at hand, but, judging from its appearance, it must have been enlarged beyond at least one-fourth of its normal size.

The kidneys also appeared somewhat enlarged, and presented on section several white or creamy star-shaped patches both in the cortical and medullary structures. Spleen slightly congested; other abdominal organs healthy.

From the foregoing the reader will no doubt have anticipated the usual sad tale of a drunken husband and a mismanaged household; but in this case both husband and wife lived irregularly; and the latter having been arrested on the charge of having murdered her husband, and confined in the Cupar jail, she died of valvular disease of the heart and phthisis on the 6th of June 1883, no doubt hastened by mental emotion. The facts of this case being particularly clear, it may not be out of place to give them in detail. The whole circumstances of the case pointed out in the clearest manner that hæmorrhage from the temporal artery was the cause of death, and if anything further were needed, the accused herself supplied it by informing me on the 17th of April, six days after the deed was committed, that her husband had been drinking, came in late, and wanted some more whisky, whereupon some angry words ensued—this was at twelve o'clock at night—and in a fit of passion she took up the glass flask already alluded to, which was about half full of whisky, and flung it at his head, striking him over the right temple, from which blood at once flowed copiously. She remarked that the blow stunned him and knocked him on to a chest, from which, after a time, he crawled into bed, and, thinking that the hæmorrhage would cease, did not call for assistance. He died at 3 A.M., exactly three hours after the injury. On my suggesting that he must have been restless during that time, and throwing his arms about, owing to the stained state of the wall, she admitted that he had, but that his restlessness she mistook for the effects of intoxication. Notwithstanding this, however, there was an evident attempt at concealment, and the little care that was taken in dressing the body afterwards, and the apparent haste in arranging for the funeral, tend to point out that there was something wrong. At first I was at a loss to account for the carbonaceous condition of the lungs, his occupation being that of mason and builder, but on making further inquiry into his history it transpired that he had commenced life as a miner; this condition, therefore, must have existed for many years. It will thus be seen that though the case at the beginning presented many difficulties, they were all overcome, and what one would look upon as common-sense evidence turned out to be the true interpretation of the appearances and surroundings. One observation further I would make, and that is, there is a notion prevalent that in wounds of the scalp, if an artery is completely severed, the hæmorrhage immediately ceases owing to retraction of the cut ends. In this case the artery was completely cut across, yet the case proved fatal, and no doubt in the majority of cases the same result would happen if further measures were not taken to arrest the flow of blood.

IX.—A CASE OF FRACTURE OF THE SPINE IN MR MILLER'S WARDS, ROYAL INFIRMARY.

Reported by **Allan C. Sym**, M.B., C.M., Resident Surgeon.

P. M., age 32, a publican, was admitted to Ward XVI., Royal Infirmary, on the 8th December 1883, under the following circumstances:—The patient was brought by the police at 2 A.M. in a state of complete unconsciousness, and his breath smelt strongly of alcohol. He had been found lying at the foot of a stair in Leith Walk, his hat lying on the landing two flights above. On admission he was found to have a severe scalp wound on the back of his head, the wound being crescentic in shape, and its extent 9 inches. The bone was denuded of pericranium at various points. There was also an ecchymosed condition of the right eye, and one or two bruises on the knees. The wound was stitched up, drainage-tubes put in, and dressed with salicylic wool.

The patient was completely under the influence of alcohol, and unable to tell how the injury had occurred, or if he were hurt elsewhere. He was put in bed and his water drawn off. During the night he was somewhat noisy, but made no complaints, and it was not till 7 o'clock that it was noticed that the hot-water bottle placed against his leg had blistered it without the patient being aware of it.

At 11 A.M. on the 8th the patient, having now regained consciousness, was found to have lost the sensory and motor functions of both legs, and an hour afterwards the anæsthesia had extended as far as the umbilicus, the patient being also unable to pass his water. The penis, however, was sensitive, and remained so for some time afterwards. Four minims of ergotin were administered hypodermically and injected well into the gluteus muscle without the patient being in the least conscious of it. The wound on his head was redressed, and during the process he complained of pain in the back of the neck.

At 7 P.M. on the same day sensibility to touch was lost as high as six inches above the umbilicus, and at 8.30 the anæsthesia had extended two inches higher.

At 11 P.M. the anæsthesia had reached the upper border of the third rib, four inches above the point noted at 8.30, and 10 inches above the umbilicus. At this time it was found that the plantar reflex on both sides was much exaggerated, but the other reflexes, patellar, cremasteric, and epigastric, could not be produced.

On the 9th December, at 10.30 A.M., the line of anæsthesia was found to be in the same position as when last noted, and even firm pressure on the abdomen could not be felt.

At 3.30 P.M. it was found that the inner (ulnar) side of the forearm, over the area corresponding to the distribution of the internal cutaneous nerve, was anæsthetic, and that the patient did not feel the prick of a pin. The respiration, which hitherto had been abdomino-thoracic, from this time onwards was entirely diaphragmatic.

Occasional injections of ergotin had been given up till now; but as the line of anæsthesia had ceased to spread, no more was administered.

At 8 P.M. the man's condition was very low, breathing being very laboured, and death seemed imminent, but towards morning he revived somewhat.

On the 10th December, at 8.30 A.M., breathing was laboured, and there was considerable torpor. The patient had great difficulty in getting rid of the mucus which had accumulated in his trachea, having no power of coughing it up.

At 9 P.M. the patient complained of great weakness and of being tired out.

11th December.—The patient spent a restless night, the breathing being quick and shallow. The dressing of the head, although changed twice daily, had a very bad odour, and charcoal poultices were accordingly applied. The breathing improved somewhat in the morning, but again became worse in the afternoon. At 11 A.M. 25 minims of ether were administered hypodermically, and the patient's condition improved. At 12.30 a similar dose was given. The patient had still great difficulty in clearing his throat of the mucus which collected there.

At 8.30 P.M. his breath had a peculiar sweetish smell, such as is described in pyæmia, and the dressing of the head had a very offensive odour.

At 10 P.M. the patient complained of weakness extending to his arms, the sensibility of the arms, however, being unchanged. At this time, on account of the commencing pyæmia, the patient was ordered the sulpho-carbolate of soda—20 grains to be taken every two hours. At 12 P.M. the man's urine had been dribbling away.

On the 12th December, at 1 A.M., on account of his weak condition, the patient was ordered 30 minims of the aromatic spirit of ammonia, but as this caused considerable excitement it was not repeated. At 11 A.M. the patient was unconscious and muttering incoherently. Brandy was ordered to be given if he showed further signs of weakness, and at this time 20 minims of ether were administered hypodermically. On each great toe was a black spot due to the pressure of the bed-clothes, and accordingly the feet were wrapped in wadding, and a cage put over to protect them. At 11 P.M. the weakness still continued, the pulse being weak and irregular.

On the 13th December, at 3 A.M., the patient was very weak, with illusions of vision, and talking to imaginary friends. 20 minims of ether were administered hypodermically. At 9 A.M., continued unconsciousness. The urine, when drawn off, was ammoniacal. At noon there was no change. Brandy was still given at intervals.

At 5 P.M. the patient was decidedly worse, and becoming cyanotic. At 11 P.M. the cyanosis was more marked, the breathing quick, forty-eight to the minute. The marks on the toes had not increased since the cage was put over the feet. The whole of the right leg was very œdematous. The patient was conscious of the presence of fæces in his rectum, but could not retain them at all. The head was dressed, and found to be very bad-smelling and in a sloughy condition. The breath, however, had lost the scent described as that of "new-mown hay."

On the 14th December, at 3 A.M., the patient was very weak and cyanosis increasing. A dose of ether was given hypodermically, which seemed to revive him, and this was repeated at 9 A.M. At 1.45 P.M. the patient died asphyxiated, with a temperature of 106°·4. The temperature did not rise after death.

Post-mortem Examination, 17th December.—Length, 66 inches. Circumference round the shoulders, 39 inches. Body well nourished. Rigor mortis moderate. Lividity slight. Pupils equal, but somewhat contracted. There was a cicatrix of an old burn extending from the right axilla to the shoulder, and another over the bend of the elbow; there were also others on the right side of the neck and face. Extensive ecchymosis round the right eye, and also subconjunctival ecchymosis of the same eye on its outer side. Very slight ecchymosis below the left eye. Small bruises over the front of each knee. Small discoloration of the tip of each great toe and over the first joint (the result of commencing bed-sores). Commencing bed-sores on each heel. An extensive excoriation on the back of the right leg, the result of the application of a hot-water bottle during life. A very extensive wound on the back of the head, measuring 5½ inches in length from above downwards, and 3½ inches transversely. The scalp over this area separated, and the bone bare at two places. The wound in a sloughy and unhealthy condition. Skull-cap natural. Surface of dura mater natural. The superior longitudinal sinus contained some fluid blood. There was nothing particular to be noted with regard to the surface of the brain. The sinuses at the base of the brain contained a good deal of fluid blood. The bones at the base were quite normal. The weight of the brain was 3 lbs. 4 oz., and its external configuration was normal.

There was some extravasation of blood under the muscles and tissues at the back of the neck. The laminæ of the sixth cervical vertebra were broken, as were also those of the seventh. At the part corresponding with the fracture of the vertebræ there was a small extravasation of blood into the dura, and the cord at that part looked distended. The posterior part of the cord was exposed by cutting up the membranes. The cervical enlargement looked and felt soft and flabby, but there was no hæmorrhage. The lumbar enlargement was also soft and flabby, but otherwise the cord was normal. The height of the softening of the cervical enlargement was opposite the fifth, sixth, and seventh cervical vertebræ. Section of the cord showed no alteration in the colour of the cord. There were no hæmorrhages into the cord. On examination of the spinal column from the front it was found that the body of the seventh cervical vertebra was fractured. Nothing else of note was found at the examination.

Remarks.—The man was so much under the influence of alcohol that it was impossible to elicit anything from him. Indeed, he felt no pain while the wound on his head was being stitched up and dressed. The blistering of the leg by the hot-water bottle can only be looked upon as an unfortunate accident which could not be foreseen.

At first it was thought, after the paralysis had begun to develop, that it was due to effusion of blood round the cord, the space between the bone and the cord being filled up with blood, and the pressure of this causing extension upwards of the paralysis, and it was for this reason that the ergotin was given. Eventually, however, the correct diagnosis was made out, viz., fracture of one or more cervical vertebræ. The diagnosis was arrived at in a similar way to that which was employed in a case of Professor Chiene, reported in the *Clinical and Pathological Journal* some weeks ago. The only nerve of the brachial plexus affected was found to be the internal cutaneous; and as this takes its origin from the eighth cervical and first dorsal spinal nerves, it followed that the injury to the cord must be in that region. Unlike Mr Chiene's case, however, the paralysis extended. In Mr Chiene's case the paralysis was complete from the first. In this, however, it crept upwards, taking a considerable number of hours before the full amount was reached.

An interesting point in the case was the sensitiveness of the penis when there was anæsthesia of the abdomen, even on firm pressure, and also that the man knew when his bladder was full and desired that it should be emptied. With regard to the fracture of the spine the diagnosis was difficult. During life it of course was dangerous to move the head about, as this might have made matters worse. But after death, while the man was lying on the post-mortem table, it was found impossible to obtain crepitus, neither was there any undue mobility.

The temperature charts of this patient were somewhat interesting. On the morning of admission the thermometer registered 97° in the axilla, and in the evening of the same day the temperature was 101°. After this the temperature once fell as low as 99°, but on an average it stood about 102°, and on the day of death it ran up from 99°·4 at 5.30 A.M., at 7.30, it was 103°·2, at 9.30 105°, at 12 noon 106°·4, which was the temperature at the time of death.

Part Second.

REVIEWS.

Clinical Lectures on Mental Diseases. By T. S. CLOUSTON, M.D. Edin., F.R.C.P.E., Physician Superintendent of the Royal Edinburgh Asylum for the Insane, Lecturer on Mental Diseases in the Edinburgh University, etc. London: J. & A. Churchill: 1883. Octavo, pp. 624.

THIS work ought, in the first place, to be received as a text-book for students and young practitioners. Dr Clouston has been sufficiently long a lecturer on insanity to know the difficulties that are most felt by those who begin to study mental diseases, to be aware of the great responsibilities medical men undergo in prescribing proper treatment for the insane, in treating them in their own homes or in private houses, or in signing certificates which are practically warrants of imprisonment. Few medical practitioners are so fortunate as to have much familiar acquaintance with insanity before they are called upon to decide such momentous questions. We should say that to have read a book like Dr Clouston's lectures, and mastered his definitions, must make a man as well prepared as books can make him to recognise the principal symptoms of insanity; and the directions for examining a patient and making out a lunacy certificate will save him from much perplexity and possible discredit. Dr Clouston's method of expression is sometimes very happy, falling into pithy aphorisms; and though one requires to read on to get accustomed to some of his phrases, his sense is clear. Now and then he startles us with a remark showing a deep acquaintance with human nature. Though going over ground for the most part well explored, the book is truly original in this sense, that everywhere it presents a great elaboration of thought. We feel, somehow, that every statement has been weighed, considered, and viewed in many different relations.

Some medical books remind one of mosaic, and the different stones do not always fit. Dr Clouston's reminds one of a painting where the colours have been carefully ground, the tints chosen, and each stroke laid on to produce a combined effect. There is no expenditure of stars and daggers to show off the author's reading, but the student gets all the latest information about the symptoms and treatment of insanity in well-considered words.

In the arrangement of his book Dr Clouston first explains and comments upon the well-known divisions of the French school—melancholia, mania, dementia, and circular and impulsive insanity—after which he follows the classification of Dr Skae. In upholding the flag of his old chief, Dr Clouston has shown an amount of fidelity passing even beyond the bounds of chivalry. Dr Skae's classification of the various forms of insanity on a rational and practical basis was a happy sketch for the year 1863; but had the genial old man lived till 1883, he might himself have dropped some of his forms. We leave to other critics to aim their shafts at the figures in the little museum in Lecture XVIII.—"The Rarer and Less Important Clinical Varieties of Mental Disturbance," such as the insanity of oxaluria and phosphaturia, of asthma and diabetes, and post-connubial insanity. Why not preconnubial too?

Let us take one of Dr Clouston's forms—the insanity of adolescence—upon which he has evidently expended a good deal of careful writing. Admitting generally the correctness of his statements, that the whole being acquires a greater strength and maturity at twenty-five, without losing power or passion, we totally fail to see the connexion between the completion of a man's growth and the sudden outburst of a fit of mania. Dr Clouston gives the case of a fisherman, quiet, steady, and intelligent; his bodily health seemed absolutely perfect "He was a fine young son of the sea." He became elevated, and then maniacal and violent. This lasted for about a week, and he appeared to be well. In a few weeks he again became maniacal, and was sent to the asylum. The violent symptoms passed away in ten days, and he was dismissed in three months, during which his beard and whiskers, which were nascent on admission, grew out full and strong. Dr Clouston remarks, in conclusion, "This was a case in which there seemed no exciting cause whatever for the attack but the completion of the period of adolescence." Dr Clouston, however, speaks of grounds for believing that there was a hereditary neurosis in this young man's family, and it appeared as if something was preying on his mind. When questioned he gave a trivial explanation for this; but we know of instances where circumstances have preyed on the minds of young people, ending in insanity, of which they would give no verbal explanation; and even granting that we can assign no exciting cause for the insanity of the young fisherman save adolescence, we should like to know in what respect it differed from the adolescence of other men to produce such disastrous results. In the "Insanity of Lactation" we at any rate can see the connexion between an exhausting function and a great strain upon the powers of nutrition and assimilation, and we can well conceive that this may be the cause of melancholia, as of amaurosis or of phthisis; but to our minds, at least, no connexion as of cause and effect is suggested by the word adolescence.

Nevertheless, a man cannot write a book on insanity without some arrangement; and it is allowed on all hands that a classification beyond the range of criticism has not yet been contrived. Dr Clouston's work ought to be judged by the general effect of the whole, which in our opinion is very successful.

There are no fewer than 260 cases of insanity described in the work; and if they make the book considerably longer, they give a kind of realism to the generalized descriptions of symptoms, and add the attraction which personal interest always does to impersonal description. The book is illustrated by eight lithographic prints, which well answer their purpose. The first one, representing the changes in the vertex of the brain in advanced general paralysis, is one of the best we have ever seen. A perusal of the book will give both pleasure and profit to those who are already well acquainted with the subject. As insanity is studied in its clinical aspects alone, the lectures do not deal with anything which is not illustrated by existing cases in the Morningside Asylum. Nevertheless, the material there is so ample that little is omitted which might not be easily learned when needed.

In a subject like insanity, which presents grounds for wide difference of opinion and endless speculative debate, it is useless to expect that any two men will arrive at exactly the same views. It would be presumptuous to point out differences in open questions as errors on the part of one so thoroughly acquainted with the subject; we cannot help, however, expressing our regret that Dr Clouston should have given his adhesion to the doctrine of moral insanity. As Dr Workman well says, it is indeed high time that the obnoxious words should be expunged from the literature of alienism and from the minds of the whole community. The reasons for a man observing the rules of morals may be the desire or determination to lead a pure life, or the fear of the loss of the good opinion, good will, or help of his fellow-men, and the fear of their displeasure in the shape of expulsion from society, loss of credit in business, loss of employment, or legal punishment. A man destitute of the moral sense may be a hypocrite, or even a criminal; but if his observing and reasoning powers be normal, and self-love the basis of his actions, he will have a vivid intellectual perception that there are some rules or regulations of society (however despicable in his eyes) which he cannot afford to transgress. If indifferent to praise or blame, he will at least fear the jail or the asylum; in fact, a man of no morals, but with a tolerable intellect, would never come before the physician of an asylum at all. Morals may not be founded solely on utility, as Volney or Bentham held, but flagrant, shameless, and reckless immorality is so sure to entail sufferings, ruin, and restraint, that those who will observe no rule of conduct *must* be weak intellectually, and they all are so. As Dr Clouston himself remarks, most of Pritchard's cases of moral insanity are examples of simple mania, and we believe that a complete examination of all the cases presented as moral insanity would show that they all had mental deficiency. Depravation of character is a common result of insanity; but for this insane morality would be a better expression than moral insanity. Just as some men are peculiarly deficient in understand-ing the relation of numbers or the niceties of language, so others are deficient in estimating the result of their actions in moral relations. Moral insanity must be based on the idea that the division of the mind into the intellect, the emotions, and the will are real divisions, and not formal or technical ones. Dr Clouston says that "conscientiousness, the sense of right and wrong, is to a large extent an innate brain quality." We should suppose that, if moral insanity be assumed, conscientiousness would be dependent upon the healthy activity of a definite portion of the brain, as in effect the phrenologists made it. Dr Hammond, who does not appear to be a believer in moral insanity, observes in his book on insanity, "It is possible, in view of the researches of Luys and Meynert, that the superior layer of cortical cells is concerned with the intellect and the emotions, and the lowest with volition, but this cannot yet be considered as definitely established." We think not.

It may be viewed as a proof of the thoroughness of the work and the originality of the author that so much care has been taken with the therapeutics of insanity. In ordinary practice the tendency of able young physicians to study pathology, and scientifically to watch how people die or recover, is somewhat curbed by the irrepressible desire of the vulgar to get something which they hope will cure them of their diseases; but the insane generally hold that there is nothing the matter with them, or fear drugs as intended to destroy them or retard their recovery. Thus the physician of an asylum who nourishes a philosophical belief in the vis medicatrix naturæ saves himself a world of trouble, and, having plenty time to attend to other details, is generally thought a very efficient superintendent. But Dr Clouston, whose appetite for work of every kind is enormous, has sought out and thought out, by observation and experiment, methods of treatment suitable to the various forms of insanity, which constitute perhaps the most valuable feature in the book. He lays much stress upon the avoidance of a stimulating diet, both in the prophylaxis and treatment of insanity, and insists upon the patient's strength being kept up under the strain of great excitement by the administration of a startlingly large quantity of food. At every new opportunity he repeats his advice, if possible, to make the patient fat. Dr Clouston's treatment has been called "the gospel of fatness." He has no faith in opium in any form of insanity. It cannot be denied that his distrust is based upon very careful experiments made by himself. On the other hand, Dr Mendel of Berlin thinks that his experiments have proved opium to be the best remedy in melancholia, and Dr Bucknill, reviewing Voisin's *Clinical Lectures on Mental Diseases*, remarks, "We have no doubt that opium is the most useful of all drugs in insanity, and yet we cannot but express some astonishment at the unexampled success of our French *confrère.*" As long as such authorities disagree this question cannot be held as settled. Dr Clouston has small faith in hyoscyamus and hyoscyamine, of which our limited experience has induced us to think well. In other points we should have no hesitation in taking Dr Clouston as our guide. The following passage is a forecast into the therapeutics of the future which we should like to see verified:—

"This is one example of very many cases I have met with, where a local inflammation, a fever, an internal disease, a carbuncle, a crop of boils, or septic blood-poisoning, have cured insanity. We try to do the same thing sometimes in cases that are strong in the body by severe blistering, but seldom succeed in producing the same marked and immediate effect. I believe that some day we shall hit on a mode of producing local inflammation or manageable septic blood-poisoning by which we shall cut short and cure attacks of acute mania. I have been most impressed by some of the cases I have met with. But such intercurrent diseases do not always cure. I have often seen them occur in cases of acute mania and do no good. I suppose, in fact, the failures may be more numerous than successes, but the latter naturally make more impression on one's mind, and loom larger in one's field of experience."

We have given our opinion of Dr Clouston's clinical lecture all the more freely that we have no doubt of their success. Th book will increase his own well-deserved reputation as a skilfu physician in the treatment of insanity, and add lustre to the schoo of medicine with which he is connected.

Politzer's Text-Book of the Diseases of the Ear and Adjacent Organs. For Students and Practitioners. Translated at the request of Professor Politzer, and Edited by JAMES PATTERSON CASSELLS, M.D., M.R.C.S. Eng., Aural Surgeon and Lecturer on Aural Surgery at the Glasgow Hospital and Dispensary for Diseases of the Ear. With 257 Original Illustrations. London: Baillière, Tindall, & Cox: 1883. Pp. 810.

THE work of Politzer, in its original as well as in its English translation, has, as was its due, been most favourably received in Germany, America, and in our own country. Those who have known Politzer's work and writings could have no doubts regarding the high and almost universal esteem that ought to be placed on a text-book on diseases of the ear from his pen; and the issue of the first volume in 1878 was a worthy and welcome instalment. The second volume did not appear until 1883, simultaneous with Dr Cassells's translation into English of the two volumes into one large, unwieldy volume. This to English readers is most unfortunate, as the two original volumes are easy and pleasant to read, whilst the translation, although admirably done, is put up in book-form most trying for the patience and strength of arm of the reader. Neither the paper, printing, nor illustrations of the English edition are to be compared to those of the German; in fact, the latter are simply execrable, and one or two of them have been omitted. Of a work of such magnitude it is impossible, in our limited space, to enter into details. The translation has been excellently performed, and the arrangement of the subject-matter, though novel, has been retained. After a couple of pages on the anatomical division of the ear, Politzer proceeds with an instructive and original description of the anatomy and physiology of the sound-conducting apparatus with reference to diseases of the ear. The physical methods of examining the organ of hearing, of which a considerable portion is devoted to the author's method of making the Eustachian tube permeable (Politzer's method) and its therapeutic value, and the section on the testing of the hearing power, are well worthy careful study. The universal acoumeter, designed by Politzer, is figured and described in this section; and as it is an instrument deserving more general adoption, we would make a special note of it (p. 163 and following, English edition; p. 189, German edition). The section on the diseases of the conducting apparatus, to which the greater part of the work is devoted, contains a lengthened description of the adhesive processes in the middle ear which arise in the course of chronic catarrh, and form the basis of permanent defects in hearing. The numerous and various remedies, operations, etc., which in the course of years have been brought forward to cure or alleviate the more distressing symptoms which arise in the course of this disease are stated and explained, and, unfortunately, another suggested by the author, which he states to have been beneficial in two cases, viz., section of the anterior ligament of the malleus. The chapter upon purulent inflammations of the middle ear merits careful perusal, and Politzer's classification of the inflammatory affections of the middle ear consideration by future compilers of text-books on aural surgery. Then follow chapters on diseases of the mastoid process; diseases of the external ear; a chapter on ear disease and life assurance, where we find stated that all persons are to be unconditionally rejected by life insurance companies in whom examination proves the presence of the following affections of the organ of hearing:—1. Ulceration of the auricle and external meatus, due to the crumbling away of an epithelioma. 2. Lupous affections of the external ear, as experience shows that individuals affected with lupus do not live long. 3. Contraction and exostosis of the external meatus associated with suppuration. 4. Chronic purulent inflammation of the external meatus, with exposure of its osseous walls. 5. Chronic suppuration of the middle ear, with perforation of the membrana tympani, especially (*a.*) with formation of granulations and polypi in the tympanic cavity; (*b.*) with desquamative processes in the middle ear; (*c.*) with symptoms of caries in the temporal bone; (*d.*) with paresis or paralysis of the facial nerve; (*e.*) and with formation of fistulæ on the mastoid process. 6. All affections of the ear associated with giddiness and unsteady gait, when these symptoms cannot be traced with certainty to an affection of the organ of hearing, and where the possibility of a cerebral affection cannot with certainty be excluded. The above may be cordially accepted as a trustworthy guide in practice by the general practitioner, from an experienced and thoroughly reliable aural surgeon. The anatomy of the internal ear, with its physiology, diseases, and injuries, followed by a well-considered chapter on cerebral disturbances of hearing, bring to us the stronger conviction that Politzer, with all his experience and learning, has carefully weighed each sentence of the numerous divisions of his subject before writing his text-book. There follow chapters on malformations of the ear, deaf-muteism, and hearing instruments for the deaf, whilst Dr Cassells has added a helpful and interesting appendix of therapeutic formulæ. The exhaustive table of contents, as given at the commencement of each volume in the German, has been omitted in the English edition; and the contents of the volume are shortly indicated, as we have given them above. The index at the end of the English, whilst exceptionally good, does not supply the want which the "Contents" do in the German edition. Several errors in translation have been met with, but they are trivial; and when one considers the large size of the book, nothing but praise and well-merited thanks are due to Dr Cassells for bringing Politzer's work before the English-reading public. The work, either in German or English, ought to be in the hands of every aural surgeon; but we have not seen our way to recommend it unconditionally to our students. There are too many instances where a departure is made from the simple methods of diagnosis and treatment which ought to be the groundwork in all departments of medicine. We have already occupied too much space to enter into our reasons for this caution, but would refer the reader to pp. 260, 262, and following, of *The Structure and Diseases of the Ear*, by Pilcher, London, 1842; and in contrast, and as a co-worker against too much instrumental interference, to a lecture on "The Removal of Foreign Bodies from the Ear," by D. B. St John Roosa, M.D., etc., of New York, published in *The Medical Record*, Vol. XX., No. 24, 10th December 1881, noticed in this Journal, p. 1029, May 1882.

We have given Dr Cassells's edition as the first prize in our classes, carefully directing the student to the parts where too much instrumental interference is mentioned in the text-book.

We wish Dr Cassells's translation all success, and heartily recommend it to the medical profession.

A Manual of Pathology. By JOSEPH COATES, M.D. London: Longmans, Green, & Co.

THIS is just such a work as has been desiderated during the last decennium—in fact, since pathology proper has been systematically taught in our universities and schools of medicine. The author goes over the whole subject, as it is usually treated in a course of lectures, in a clear and rational manner, and gives within moderate bounds (although the volume extends to 902 pages), well and tersely put, an account of the morbid changes to which our tissues and organs are chiefly liable.

The plan of the work is excellent, being primarily divided into two divisions—the first dealing with the pathology of general diseases, or general pathology; the second with the diseases of special organs and systems, or special pathology. Under the former comes the consideration of the morbid conditions of the circulation of the blood, of inflammation, degeneration, and atrophic changes, hypertrophy and regenerative changes, tumours and parasites; and under the latter head there is an admirable account, not too long, but sufficiently full for all general purposes in a text-book, of the distribution and nature of those micro-organisms which are now perhaps more than ever occupying to so great an extent the attention and interest, both pathological and clinical, of the physician and surgeon. The second division is, as before stated, devoted to special pathology, commencing with that of the organs of circulation, passing on to that of the nervous system, respiratory, digestive, and genito-urinary, and ending with the bones and joints and diseases of the skin.

After a careful perusal of the work we would but mention one or two points. The classification of tumours followed by the author is founded upon their anatomical structure, and differs somewhat from others. Dr Coates divides them into three groups—1, Those whose tissues reproduce a single simple physiological tissue, or simple tissue tumours, as fatty tumour; 2, Those into whose structure more than one simple tissue enters, or compound tissue tumours, as cystic, and among this group he includes the papillomata; and 3, Tumours mainly composed of cells, or cellular tumours, which consist of the carcinomata, sarcomata, and lymphomata.

As to the cause of simple perforating ulcer of the stomach, he is not satisfied that embolism of an arterial branch is the chief, because this pathological condition is not met with specially in cases of embolism and thrombosis of the arteries of the organ in question, but, in the immense majority of instances, in cases where no such disturbance of the circulation exists; and, on the whole, he thinks it probable that an acrid gastric juice, taking advantage of any accidental stagnation (*e.g.*, a venous hyperplasia) in a defined area of the mucous membrane, may lead to its necrosis and the formation of the ulcer, and that all the more because ulcers such as those caused by wounds or the action of caustics heal readily, while the one under consideration does not.

Under Bright's disease such cases only are included in which there are undoubted inflammatory manifestations in the kidneys, and he treats of the anatomical and histological conditions of this disease under three heads, viz., inflammatory changes affecting chiefly the Malpighian bodies, or glomerulo-nephritis; that in which the tubes are chiefly concerned, parenchymatous nephritis; and that which affects chiefly the connective tissue, interstitial nephritis, and at the same time points out that each form may encroach on the domain of the other.

Two undoubted truths are enunciated in the introduction, viz., that a knowledge of physiology is the necessary preliminary to the study of pathology; that, in fact, pathological processes are merely physiological ones altered; and, again, that clinical observation is of great importance in the study of pathology; in fact, we think the former cannot be understood without a good knowledge of the latter—in his words, they elucidate each other.

The volume is freely supplied with woodcuts, many the author's own, some from other sources, and it is throughout generally well got up.

In conclusion, we feel thoroughly justified in speaking of this work in terms of commendation, and do not think we are far from being correct in saying it will now be the standard class-book on pathology for the student of the present.

The Essentials of Pathology. By D. Tod Gillian, M.D., Ohio. London: Henry Kimpton.

"It never rains but it pours," is an adage with a fair amount of truth in it, and is exemplified in the fact that quite a shower of works on pathology have lately fallen upon the professional reader.

The one before us calls for but little remark. There is nothing fresh in it, and we cannot think why it has been brought into existence by the author, as it appears to us to fill no particular vacancy in the subject of pathology. It is a small work, and gives an outline of the subject it treats of, but nothing more; and although we admit it is sufficiently well and clearly written as far as it goes, it will not take the place of a class-book proper: in fact, the author does not intend it to supplant more pretentious works.

The forty-seven woodcuts contained upon its pages are, if we mistake not, almost, if not all, taken from Rindfleisch, and without a single word of acknowledgment, as far as we can see. They are never referred to in the pages of the book; and while some are lettered as in the original, and a reference to the letters given beneath the cut, the letters on others are not even thus noticed.

The Pathology, Diagnosis, and Treatment of the Diseases of Women. By GRAILY HEWITT, M.D. Lond., F.R.C.P. Fourth Edition, Revised, Enlarged, and in great part Rewritten, with numerous Illustrations. London: Longmans, Green, & Co.: 1882. Pp. 908.

IN noticing the appearance of this, the fourth edition of Dr Graily Hewitt's book, it is unnecessary to enter into a detailed criticism of his well-known views regarding the mechanical pathology of uterine affections. Suffice to say, he is as fully convinced as ever of the accuracy of his position, and adduces fresh facts and observations in his support. He now advances a step further, too, and seeks to explain how and why it is that changes in the shape and position of the uterus are so liable to occur,—what, in short, are their predisposing causes. An answer to these questions he finds in what he terms "chronic starvation" of women—not starvation from want, but from inattention to diet, combined with a systematic and often lengthened practice of taking little food, resulting in impairment of the general health and strength, and alteration in the shape and position of the uterus. Though not prepared to agree with him entirely as regards the latter or local results of such starvation, still there can be no doubt that Dr Hewitt has done a good service in drawing attention as he has done to the important effects of malnutrition on women, especially those suffering from pelvic disorders, and the necessity that there is for attending to such general conditions when attempting the treatment of local troubles.

As coming from a man of such distinct individuality as the author, the book is well worthy of perusal; and not the least valuable parts of it will be found to be the clinical cases scattered throughout it, and the excellent appendices on differential diagnosis.

A Clinical Handbook of the Diseases of Women. By W. SYMINGTON BROWN, M.D., Stonehaven, Mass. New York: William Wood & Co.: 1882. Pp. 237.

WE are somewhat at a loss to understand the principle upon which the author has written this book. We are told that it does not claim to be a treatise, but that "it is intended as a practical guide on most of the diseases peculiar to women,"—puerperal diseases, gonorrhœa, and syphilis. The space devoted to the various subjects is very unequal, and somewhat arbitrarily so. Thus, while we have 21 pages devoted to ovarian tumours, in which the oft-repeated and familiar description of ovariotomy is included, such essentially gynæcological and everyday affections as para- and perimetritis are but imperfectly discussed in a couple of pages.

The book gives, to one already acquainted with the subject, a fair idea of the writer's principle of treatment, with which, on the whole, little fault can be found; but for students we hardly think that it will prove of much use. All through little care is given to assist in diagnosing the various conditions treated of, while etiology and pathology are hardly referred to. As a text-book, therefore, or, as the author chooses to term it, "a practical guide," the work cannot be compared to, or compete with, such a manual as that of Hart and Barbour.

Germs, Dust, and Disease: Two Chapters in our Life History. By ANDREW SMART, M.D., F.R.C.P. Ed. Edinburgh: Macniven & Wallace.

IN this volume we have a reprint of two lectures delivered under the auspices of the Health Society of Edinburgh. The first of these, which is on preventible disease, deals in a popular way with epidemic affections and the germ theory, the author claiming to have been the first to discover microscopic germs of zymotic disease in the tissues of animals when he pointed out the characteristic bacterium of rinderpest. The lecture concludes with a few paragraphs on the means necessary for the control and prevention of infectious diseases, and is supplemented by an appendix, in which the rules to be observed during prevalence of the different zymotic diseases are well and clearly given. In the second part of the book the effect of dust in causing disease is dealt with, and the whole subject of trades phthisis brought under notice. Tables are given showing, in regard to the different trades, the percentage of consumptive patients in the total number of those sick, and showing also the mean duration of life in those engaged in certain trades. Attention is called to the particular methods proposed for reducing the amount of consumption and other ailments incident on the various trades. The necessity for the ventilation of workshops is specially insisted on, as is also the necessity for the use of respirators where these have been shown to be of service. In the views expressed and the recommendations given there is little to which exception can be taken. Most of these are sound. We have, therefore, pleasure in commending the book as a popular and accurate account of the subjects with which it deals.

Surgical Applied Anatomy. By FREDERICK TREVES, F.R.C.S. Cassell & Company, Limited: 1883.

CASSELL & COMPANY, Limited, have issued several well got up "Manuals for Students of Medicine." This one on "Applied

Anatomy" is excellently written and illustrated. We do not profess to have read the book through, for there is a great amount of reading in it—perhaps rather much; but what we have read we have found to be interesting and reliable. We have no hesitation, therefore, in recommending the book to students and surgeons as a work of reference. The illustrations are mostly taken from Braune and Agatz, the former showing sections, the latter amputations. We congratulate Mr Treves on the excellence of his work.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXII.—MEETING III.

Wednesday, 16th January 1884.—Dr D. Wilson, *Vice-President, in the Chair.*

I. Election of New Members.

The following gentlemen were elected Ordinary Members:—Joseph Carne Ross, M.D., F.R.C.P. Ed., Penzance; William Russell, M.B., Edinburgh; George Dickson, M.D., F.R.C.S. Ed., Edinburgh; Thomas Wyld Pairman, L.R.C.S. and P. Ed., Biggar.

II. Exhibition of Patients.

Dr Argyll Robertson showed two patients, one of whom illustrated the good effects of a new operation for ectropion, the other the condition of the lid two days after operation. The principle underlying the operation was to impart to the tarsal cartilage an inward curvature; for all methods of treating such cases which did not restore to the tarsal cartilage its normal curvature would certainly fail in effecting a radical cure. The apparatus employed consisted of, first, a piece of waxed silk thread about a foot in length, to either extremity of which was fixed a moderately long, slightly curved needle; second, a piece of sheet lead about an inch in length and a quarter of an inch in breadth, with the extremities rounded and the edges smoothed; and third, a piece of fine indiarubber tubing. In performing the operation one of the needles is introduced through the skin at a distance of about a quarter of an inch to the outer side of the centre of the lid, and about a line from its margin. It is then drawn through the conjunctival surface, re-introduced at the fold of reflexion between the palpebral and ocular parts of the conjunctiva, pushed downwards beneath the skin of the cheek to a point about one inch or one and a quarter inch below the margin of the lid, where it is drawn out. The other needle is made to follow a similar course about a quarter of an inch to the inner side of the centre line. The piece of lead, having a curvature similar to that of the globe imparted to it, is then fixed beneath the ligatures on the conjunctival surface, and the indiarubber tubing under them on the outer surface, after which the free ends of the thread are tied over the lower part of the tubing. The object of the lead is twofold, to impart the proper curvature, and to prevent the ligature cutting or otherwise injuring the conjunctiva. The tubing prevented injury to the skin. Six eyelids have already been operated on, and the result has been highly satisfactory. Part of the good results following the operation are due to the suppuration which takes place in the track of the ligature, this being followed by cicatrization, which helps to keep the parts in position.

III. EXHIBITION OF PATHOLOGICAL SPECIMENS.

1. *Mr A. G. Miller* showed (*a.*) a portion of the spinal column from a case of FRACTURE OF THE CERVICAL VERTEBRÆ. The patient was admitted to hospital on 8th December 1883, suffering from a cut in the head. He was very drunk, and no particular facts in regard to the case could be made out at the time. In the course of a few hours it was ascertained that he was suffering from paralysis and anæsthesia as far up as his umbilicus, with the exception that the penis was sensitive. By 11 P.M. the anæsthesia had reached to the third rib, and involved the part of the inner aspect of the upper arm corresponding to the distribution of the internal cutaneous nerve. The penis then became insensitive, but up to the last the man felt distinctly when his bladder and rectum were full, though he could not pass his water nor control his anal sphincters. He died on 14th December, six days after admission. After death, when rigidity had disappeared, the neck was carefully examined and manipulated for crepitus or preternatural mobility, but neither was made out. The autopsy showed extravasation into the muscles of the neck posteriorly, fracture of lamina of sixth cervical vertebra with separation of the spinous process, and, further, a very distinct fracture of the body of the same. (*b.*) The BONES OF THE ARM FROM A CASE OF AMPUTATION AT THE SHOULDER-JOINT for osteo-myelitis occurring after compound fracture of the humerus. Six days before admission the patient had sustained an injury from a waggon passing over the arm, just above the elbow, and causing a compound fracture. The case was treated in the country. Suppuration occurred, followed by osteo-myelitis. It was somewhat unusual to amputate at the shoulder for an injury at the elbow, but in this instance he could not have gone lower than the surgical neck. The nature of the disease, combined with the fact that an injury of childhood had left nothing but cicatricial tissue, led him to disarticulate. Erythema of the side of the arm and shoulder, which was spreading on to the side of the chest, was present at the time

of operating, but disappeared very shortly (about twelve hours) after the operation was performed, and did not recur.

2. *Dr C. W. MacGillivray* exhibited, (*a.*) for Dr Heron Watson, THE RIGHT ARM, SCAPULA, AND HALF OF THE CLAVICLE of a gentleman about 50 years of age, removed on account of an enormous enchondroma involving the upper part of the arm and shoulder. The patient had suffered from similar tumours of both hands for many years, and at one time the middle finger of the right hand had been amputated by the late Professor Syme on account of its inconvenient curled up position in the palm. The other fingers of both hands were also affected, but caused little inconvenience. After the operation he went to India, where he carried on his usual avocations, and was able to write, ride, and play lawn tennis until quite lately. Eighteen months ago he noticed a slight swelling in the upper part of the arm, and this had steadily gone on increasing. The elbow-joint also became preternaturally mobile, and was deformed by several nodular masses. He, however, allowed the tumour of the shoulder to increase to an immense size, until, indeed, the arm became practically useless, and the pressure on the axillary plexus occasioned great pain. He then came home, and was seen by Dr Heron Watson, who recommended the entire removal of the affected parts. The arm, scapula, and the outer half of the clavicle were accordingly amputated about three weeks ago. The patient never had a bad symptom. The dressing was not changed for a week, when all except the opening for the drainage-tube was found to have healed by first intention, and the patient was now perfectly well. (*b.*) Also for Dr Watson, A CYSTIC TUMOUR OF THE RAMUS OF THE JAW, taken from a woman on whom he had operated twenty-four years previously for a similar tumour affecting one-half of the body of the jaw. The cyst was filled with a glairy, gelatinous-looking fluid. The curious point was its recurrence after so many years. (*c.*) A PECULIAR BODY, the nature of which he did not know, found along with several others in the pleural cavity of a patient who had died from a pelvic abscess following an operation for stone in the bladder. They were only discovered on clearing out the cavity of venous clots and blood which had escaped from the engorged pulmonary vessels, so that their origin must remain as uncertain as their nature. The condition of the thoracic organs was perfectly healthy. They were about the size of beans, were covered with a smooth, serous-like membrane, and were calcareous in the centre.

IV. EXHIBITION OF MICROSCOPICAL SECTIONS AND DRAWINGS.

Dr Byrom Bramwell showed (*a.*) a transverse section through the cord in the lower cervical region, showing the CENTRAL CANAL OBLITERATED (filled up) by cellular elements, also a longitudinal section through the obliterated canal. (*b.*) A transverse section through the lumbar enlargement of the spinal cord in a case of TUBERCULAR MENINGITIS and peripheral myelitis; a sketch of the anterior median fissure and surrounding parts from the same; a section through the cord and membranes of the same, showing the layer of peripheral myelitis under a higher power. (*c.*) A SECTION through the spinal cord in a case of spinal meningeal hæmorrhage (taken from the body of a lunatic).

V. A DEMONSTRATION OF SOME OF THE METHODS OF CULTIVATING MICRO-ORGANISMS.

Dr G. Sims Woodhead gave a demonstration of some of the methods of cultivation adopted for the growth of micro-organisms outside the body. He brought before the Society the various pieces of apparatus used, and a number of specimens of "pure cultivations" of micro-organisms, drawing particular attention to those growing on Koch's peptonized meat-gelatine. The first nutritive medium mentioned was the potato, which had been sterilized by boiling. On specimens of this there were various bacilli and micrococci growing, some of special interest, such as B. anthracis, the micrococcus of osteo-myelitis, pink yeast, etc. The method of preparing the peptonized meat-gelatine was described as follows:—Take of minced beef 2 lbs.; distilled water, 2 litres. Pour the water over the beef, and allow to stand in a cool place for 24 hours. Remove the fat from the surface, and then squeeze out the fluid in a press, pouring in distilled water to make up the two litres. To this fluid add 100 grams best gelatine, 10 grams of pure dried peptone, and 5 grams of common salt; dissolve, strain the mixture, and neutralize with a saturated solution of carbonate of soda. The whole is placed in a four-litre flask, the mouth of which is stopped with a plug of cotton-wadding, and then kept at a temperature of 100° C. (in steam) for 30 minutes. The next day it is again steamed for 30 minutes, and again neutralized, if necessary, or even rendered slightly alkaline. Filter through a heated funnel (copper sheath, with glass inside, the water between the two being kept at a temperature of 80° C. or 90° C.) containing filter-paper, into small quarter or half litre flasks. Have these about half full. Steam these flasks containing the gelatine for 20 minutes; repeat this the next day, and the two succeeding days steam for 15 minutes each. This gelatine is most frequently used in test-tubes. Both flasks and test-tubes must be plugged with cotton-wadding and then exposed to a temperature of 170° C. for one hour before the gelatine is put into them. Each test-tube should contain about 10 cc. of the gelatine. The pipette used must be sterilized by being passed through a flame, or it may be well washed out first with distilled water, then with 1–1000 solution of corrosive sublimate, and again with absolute alcohol. Great care must be taken that the plugs do not come in contact with anything outside the tube or flask. To inoculate, heat a platinum wire mounted in glass, and allow it to cool; take some of the material to be inoculated on the point of the wire, hold the mouth of the test-tube downwards, withdraw the cotton-wadding, push the wire up into the gelatine, taking care to withdraw in the same line, re-insert the plug, and label the tube. Various other methods of using the gelatine were then described, for the analysis of air, water, etc. *Koch's Inspissated Blood Serum.*—The blood is drawn into tall jars, previously washed with 1–1000 corrosive sublimate and then with alcohol. (The stoppers are greased with vaseline.) It is allowed to stand in the cold for 24 hours, and the serum is removed with a sterilized pipette and run into sterilized test-tubes stoppered with cotton-wadding. These test-tubes are then placed in an upright position in a hot-air chamber, which is maintained at a temperature of from 57° C. to 60° C. for six hours the first two days, and for four hours the following four days. It is now sterilized, but should be quite fluid. To inspissate—Place the test-tubes in a reclining position in a hot-air chamber kept at a temperature of 68° C. to 70° C. (in the case of calves' serum it must be as high as 80° C.) Leave until the serum becomes just solidified. This usually takes place in about twenty minutes, but the serum of the calf requires a somewhat longer time. The serum is then ready for use. *Bread Paste.*—Take the crumb of a loaf, break it down or cut into slices, and dry at a temperature of a little more than 40° C.; grate down carefully, and place about 10 grams in a sterilized flask; add 25 cc. distilled water. Heat (in steam) to 100° C. for 30 minutes on two successive days. Allow the paste to stand for at least 48 hours, in order that it may be seen whether any growth makes its appearance before inoculation. Milk and other fluids may be sterilized in the same manner. Through the kindness of Dr Hare, who added a considerable number of cultivations, a tolerably complete set of typical growths of micro-organisms and fungi was placed before the Society. Several of these (tubercle bacillus, anthrax B., etc.), were brought by Drs Hare and Woodhead from the laboratory of the Gesundheitsamt, Berlin, where, through the generosity of Director Dr Struck, on behalf of the German Government, and the kindness of the officials on the staff, these two gentlemen were enabled to avail themselves of its splendidly organized system. Tubes prepared by Dr Becker, containing micrococci of osteo-myelitis and cultivations from these, were also exhibited.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLV.—MEETING II.

Wednesday, 12th Dec. 1883.—Dr ANGUS MACDONALD, *Vice-President, in the Chair.*

I. *Professor Simpson* showed (1) an ANENCEPHALIC FŒTUS, sent by Dr Henry Barnes, Carlisle. The mother was a multipara, aged 33. When two and a half months pregnant with the fœtus she got a fright from seeing a cow delivered of a calf, and had never felt well since. On the 7th October of this year she was seized with labour, and after suffering from irregular pains for two days she was delivered of an anencephalous fœtus, the cephalic end presenting. The cord was ten inches long. (2.) PLACENTÆ AND MEMBRANES from a case of triplets, sent by Dr Allan Thomson Sloan, Penrith. The patient was 33 years of age, and had had one child at the age of 19, but none since. Quickening occurred on the 1st June this year. Pains began on 24th October, and she was delivered of triplets at 2 P.M. on the 25th. The labour was over before Dr Sloan's arrival, but a nurse who was present informed him that the boy was born first, and then the girls followed in a common sac, which escaped without rupturing. The placenta of the boy was the largest and distinct, attached to the others by the membranes. The others were fixed. One of the girls died on the second day, weighing 2 lbs. 7 oz. The others are still living.

II. *Dr Angus Macdonald* showed (1) an OVARY WITH TUBE from a case of salpingo-oöphorectomy. The patient was the mother of three children, but she had for nearly ten years suffered constant agony, both during the menstrual and intermenstrual period. She presented herself in an exhausted, emaciated condition. After careful examination the ovaries were removed, along with the tubes on both sides. The ovaries were both cystic, and the tubes enormously dilated. The patient recovered the operation without any check, and is now in excellent health. A full account of the case will be given afterwards. (2.) FIBROID TUMOUR from a case of hysterectomy. The tumour weighed over 9 lbs., and had caused much distress and loss of blood. When exposed it was found that it had undergone twisting, so that the ovaries were lying, one in front of the other, behind the tumour. Battey's operation was thus impossible, owing to the difficulty of reaching the posterior ovary. The whole mass was then removed. On examination the broad ligament was found to contain several cysts. The tumour occupies the posterior wall and fundus, and was beginning to soften. The medical man who had sent in the case stated that the tumour had doubled itself during the last two months. The patient is doing well. (3.) A SLOUGH, involving the posterior vaginal wall and the pouch of Douglas, produced by Sims' operation for removal of cancer of the cervix by scraping away cancerous tissue and then packing the vagina with dossils of cotton-wool soaked in chloride of lime. This was the first time Dr Macdonald had met with such an accident, and he was inclined to abandon the operation in future. The patient has still some control over the rectum.

III. *Dr Webster* showed a KNOTTED CORD. The cord was 27 inches long when untied. The child was small and wrinkled, and showed but feeble signs of life when born. It was, however, resuscitated. The knot was probably formed at the eighth month, as at that time the fœtal movements became less vigorous, dragging in the pelvis, and diminution of size of abdomen. The liquor amnii at birth amounted to only a few ounces.

IV. *Dr Angus Macdonald*, as an introduction to the discussion on Professor Freund's paper, read one on TWO CASES OF EXTRA-UTERINE GESTATION—ONE OPERATIVE, which appears at page 697 of this Journal.

Professor Simpson referred to the frequency of extra-uterine fœtation, as suggested by Freund's paper. He as well as others had recognised for a long time that many cases of hæmatocele associated with one or two months' amenorrhœa were really extra-uterine fœtations. The tube gave way at this time, and the mischief followed. There is always a difficulty in determining what is the true state of matters. The loss of blood, constitutional symptoms, and hæmatocele all indicate the nature of the condition, but we cannot verify it by the use of the sound, and the actual cause may be doubtful. This uncertainty of diagnosis does not, however, interfere with our treatment. In a case in Fife which he saw lately the collapse was so great as to render any interference out of the question, and this, along with the doubtful nature of the condition, keeps us back from any active operation. When the patient recovers there is seldom any chance of verifying the diagnosis, as the fœtus is so young that it will either be absorbed or encysted. If the case is one occurring later in pregnancy, then the diagnosis is easier, as the bones may come away per rectum. A case he saw, in which the tumour felt was supposed to be a fibroid, has since proved to be an extra-uterine gestation, as the fœtal parts have escaped in this manner. The history is not always clear. There may be a history of metritis or perimetritis, and normal menstrual interruption is not present to guide us. As to treatment, modern experience renders us bolder, but we must be guarded in laparotomy, as the results of many operations have shown. The best results are obtained when the placenta has shrivelled up. He had several times in his own experience seen fragments eliminated by rectum and vagina, in cases which had been under observation for a long time. Professor Simpson considered the most original part of Freund's paper that relating to the classification of the implantations of the placenta, especially that in relation to implantation on the intestinal coils.

Dr Hart had read Dr Freund's paper with pleasure and profit. He had himself seen but few cases. He had seen Dr Macdonald operate, and he certainly regarded it as a most unique case. At the time of the operation he did not think the woman had twelve hours to live. He quite agreed with all parts of Dr Macdonald's procedure, and thought that with due precautions the operation, with similar indications, would be always justifiable.

Dr David Smart had seen two cases of extra-uterine gestation, one of which he had failed to diagnose till he had seen it as a pathological specimen. The other, even after frequent careful examination, he had diagnosed as a subperitoneal fibroid. Four months after her dismissal from Professor Simpson's ward, the doctor wrote that he had removed from her rectum the bones of a fœtus enclosed in a fibrous cyst.

Dr David Wilson had seen two fatal cases last autumn. He hoped to show the preparations from both at next meeting. In the first, tubal pregnancy had been diagnosed, and treatment directed accordingly, but the patient died in a few hours. In the second case he was called to see the patient also after rupture had occurred, but the patient was moribund and died very soon. Laparotomy was considered in the first case, but negatived, as the patient was in such a condition of collapse that the loss of very little blood indeed would have certainly produced immediately fatal results. He congratulated Dr Macdonald on the successful result of his interesting case.

Dr Barbour referred to a case of Dr Keith's in which an operation was commenced for what was supposed to be a fibroid tumour of the uterus, and it was only after cutting into the supposed tumour that the section of a fœtal limb was seen. Dr Freund mentions in his paper twelve cases which ruptured at fourth month, and this seems to go against Schrœder's view that tubal pregnancy may go on to full term. In two cases he diagnosed tubal pregnancy in the early period, and at the fourth month rupture occurred and it fell into the pouch of Douglas. In the one case the fœtus and placenta were expelled, and in three others it gave rise to hæmatocele. With regard to the tapping of early pregnancy recommended by Freund, Dr Barbour thought that there was some risk of setting up contractions and causing hæmatocele. He thought it better to wait until the sac becomes larger.

Dr P. Young said that it seemed to him an unfortunate element in Dr Macdonald's case that the large fæcal fistula which he described had occurred. He feared that it would ultimately lead to serious results, as in a case which he had seen, in which a loop of intestine had escaped through the uterus, and in which, after repair of the fistula which formed, the patient did very well as long as kept on milk diet. On returning home, however, she partook of ordinary food, and was suddenly seized with violent abdominal pain, death resulting in two hours. He thought it quite possible that Dr Macdonald's case was still liable to a similar accident.

Dr Leith Napier, Dunbar, mentioned a case in which what seemed at first to be a cyst of the broad ligament had, during subsequent pregnancy, ruptured and proved to be an enormous abscess. At one time he was inclined to regard this as due to extra-uterine fœtation, but no evidences of a fœtus were discovered in the discharges. The history of the case was most misleading. The patient was very gravely ill with frequently recurring peritonitic attacks for months, but eventually recovered. The abscess discharged both per rectum and per vaginam. The lessons to be derived were, that at times an expectant treatment was most wise, and that fistulæ might possibly do better than Dr Young expected.

Dr Macdonald, in replying, said that he hoped Dr Young's foreboding of evil might prove illusory. The patient had had no bad symptom as yet, and had already had ordinary diet for some time. He felt that the very best thanks of the Society were due to the admirable paper which Professor Freund had sent, and for the extremely interesting account he had given of the cases recorded.

Dr F. D. Astley and Dr J. W. Ballantyne were admitted Fellows of the Society.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

Cascara Sagrada.—Dr C. W. Tanzeman, Ohio, in *Therapeutic Gazette* for December, relates a series of experiments bearing on the physiological action of this drug, and sums up his conclusions as follows:—1. Cascara sagrada, when given in small doses (15 to 20 drops) acts like a vegetable bitter on the stomach; it increases the flow of gastric juices; stimulates the peptic glands to increased action, thereby bringing about healthy gastric digestion. 2. It acts on the sympathetic nervous system, sending an increased blood-supply to the intestines. 3. It increases to a limited extent peristaltic action of the small bowels, but increases it very much in the colon, and especially in the rectum. 4. It has a specific action on the rectum in the way of peristalsis, to cause this portion of the bowel to unload itself. 5. It does not affect the passage of food in the small intestines, any more than a bitter tonic would. 6. It is not a safe remedy to prescribe in pregnancy or uterine disorders, especially when given in large doses. 7. It does not affect the larger glandular organs, liver, pancreas, or spleen, even when given in cathartic doses. 8. Hypodermically the remedy will never produce the permanent good results in chronic constipation that are obtained when it is given by the mouth. 9. When employed subcutaneously it acts simply as an evacuant to the rectum. 10. The same quantity given hypodermically that produces marked effects when administered by the mouth, will not have the same effect clinically or physiologically. While cascara has a specific effect on the rectum only, we would not find it nearly so efficient were we to depend on this effect wholly in the treatment of constipation. The action of cascara on the stomach and mucous membrane of the intestines is precisely what is indicated in most of the cases, and from these, together with its specific effect, we can clearly understand why small doses act better to produce permanent results than large ones.

LIPPIA MEXICANA.—In old coughs, and in chronic bronchitis, I believe the profession has in this drug both a reliable stimulant and alterative expectorant. Its influence over catarrhal mucous membranes has been simply wonderful in my hands, and under its use, in hacking, dry coughs, expectoration becomes quite profuse, and relief correspondingly afforded. I have combined it with iodide of potassium, and also in several cases with bromide of ammonium, merely to test the virtue of Lippia mexicana as an alterative with the latter for its supposed action on the mucous membrane, but have obtained no better results than when I gave the Lippia mexicana uncombined. I am confident that most cases of chronic bronchitis will be readily benefited by this remedy, given in from a half to one teaspoonful doses every two or three hours, according to the urgency of the case. I have not tested this drug in acute bronchitis, but that it will prove valuable here I have no doubt, combined, of course, with other remedies to meet other symptoms than those which may be relieved by an expectorant. The first case I had occasion to give this remedy in was to a young Spaniard who contracted a violent cough by sleeping out of doors one night after a ball in January, with his clothing wet with perspiration from dancing. I saw him in May, and prescribed for him the Lippia mexicana in teaspoonful doses every three or four hours. In less than one week his cough had entirely disappeared, relief being promptly afforded. The patient afterwards informed me that a male relative of his, who contracted a cough about the same time, had the same prescription duplicated, and he also was promptly cured. I have since then given this remedy as a basis in cough mixtures, and its action has been very satisfactory. I think it stands at the head of expectorants, and is destined to hold high rank in popular favour when its virtues are fully canvassed.—Dr T. D. Moore, in *Therapeutic Gazette*, December 1883.

NITRITE OF AMYL IN THERAPEUTICS.—Dr d'Ancona has employed nitrite of amyl for five years, and is well satisfied with the results that he obtained. According to his experience, it is indicated and has an admirable effect in acute inflammatory diseases of the respiratory organs, in cases where either old age or a high degree of dyspnœa endangers the life of the patient. The effects of the drug pass off rapidly; in fact, they cease when the patient stops inhaling it: thereby we are enabled to use the remedy for days without causing any untoward symptoms. The fear of employing so active a medicament has prevented many an observer from obtaining its full benefit. He prescribes from 5 to 20 drops, repeated as often as is necessary, inhaled from the handkerchief (*Centralblatt der Gesammt. Ther.*)—*Therapeutic Gazette*, Dec. 1883.

IODIDE OF POTASSIUM AS AN ANTIGALACTAGOGUE.—In a recent case of excessive secretion of milk after weaning, I have found the above drug of great service. The child had been weaned more than a week, and the breasts were very large, hard, and tender. Belladonna and aconite applied freely, together and singly, had failed; this although combined with firm compression of the breasts by a bandage, and the administration of salines and purgatives, a form of treatment generally successful. Ten grains of iodide of potassium were taken three times a day, and decided relief was obtained after the fourth dose. In all 160 grains were taken, and then all trace of swelling had disappeared. With each dose I gave have a grain of quinine, as I always do when giving the iodide in rather large doses. There was no symptom of iodism. Before taking the drug internally, my patient had used the iodide and soap liniment for two days without much benefit, and continued to use it till treatment ceased (T. Jenner Verrall, Brighton).—*British Medical Journal*, Jan. 9, 1884.

COMMON SALT IN THE TREATMENT OF PLEURITIC EFFUSIONS.—Dr Tom Robinson, in the *British Medical Journal* of 22nd Dec. 1883, relates a case of pleurisy with effusion, accompanied with "cold clamminess of hands and brow, and breathing 51 times in a minute, the pulse barely appreciable at the wrist, and the heart pushed over to the right." He was ordered a teaspoonful of common salt dissolved in a wineglassful of water every hour, at the same time sweating by a hot wet flannel and a piece of waterproof sheeting. At the same time two ounces of the common black draught were administered, and all fluids were stopped. Two hours afterwards "he had most markedly improved in every way," his respiration being 48 per minute. In ten hours "he could lie on either side and get well down in bed." Next day there was no embarrassment of breathing, and all his subjective symptoms had disappeared. He was now given one drachm of common salt twice a day, with good nourishing food, and in a week he was up and out of doors.

SULPHURIC ACID AS A MEANS OF DESTROYING ANIMAL TISSUES.—M. Aimée Girard having lately proposed, at the Académie des Sciences, the destruction of the bodies of animals dying of virulent diseases by means of sulphuric acid (as their interment does not always secure from the danger they may cause), M. Régnard resolved to try the effect of this substance on the human subject.

His experiments with the bodies of new-born infants and fœtuses have been completely successful, and would no doubt be equally so if tried on the adult. To the body of an infant he adds about its weight of the sulphuric acid of commerce, and after 24 or 30 hours of maceration not a vestige of the body remained—the decomposition having taken place silently and without any smell. Neither the microscope nor the test-tube can detect the slightest trace of the body, beyond the presence of some fat, phosphoric acid, and nitrogen. M. Régnard points out how easily a body may be made away with by means of a substance so easily procured, and suggests that some restrictions should be placed on its sale (*Revue Méd.*, Dec. 1.)—*Med. Times and Gazette*, 5th Jan. 1884.

PERCHLORIDE OF MERCURY IN GONORRHŒA.—Dr Joseph M'Chesney, New Mexico, in the *Therapeutic Gazette* for December, reports the results of several cases of gonorrhœa treated by injections of a solution of perchloride of mercury—"one grain to six ounces of water." This he recommends to be used once every four hours. He obtained very successful results. The time required to effect a complete cure varied from six to ten days.

ELECTROLYSIS IN THE TREATMENT OF DRACUNCULUS.—Mr Alexander S. Faulkner, M.R.C.S. Eng., Civil Surgeon, Aden, in the *British Medical Journal* for 29th December, relates the case of a man suffering from the effects of the presence of four guinea-worms in different parts of his body. The patient was a Hindu goldsmith, aged 28 years, who had come to Aden from India. "The different positions of the several worms were as follows:—About the upper third of the outer aspect of the right leg, a worm had protruded about three inches; on the lower third of the outer side of the left thigh, another had also protruded to the extent of about two inches; on the dorsum of the left foot he had a fistulous opening, indicating the site where a worm appeared, but was broken off in the patient's endeavours to extract it, but the remaining portion of the worm could be distinctly felt in the surrounding subcutaneous tissues; and on the back of the left hand, especially between the little and ring fingers, another worm could not only be felt, but its tortuous course was distinctly visible, but, so far, its presence had caused no inflammation, and consequently there was no apparent indication of the site of its intended exit. The patient had been suffering for five years. Mr Faulkner tried galvanism as follows:—"The patient held one pole of the battery in one of his hands, and the other I applied to the head of the worm which protruded from the patient's right leg; he at once distinctly felt the sensation of the worm 'wriggling' within, which caused him slight pain. I left him for about an hour with my hospital assistant, with instructions that slight and gradual traction should be applied to the worm, and by these means, and in this short space of time, the whole worm was extracted entire. Afterwards I applied the battery as before to the worm protruding from the patient's thigh, and although the effects on this worm were not quite so satisfactory, still the result was very encouraging, as the entire worm was successfully extracted next day. Poultices were applied over the fistulous opening on the foot and the patient's left hand—the situations of the two other worms. On July 30th four inches of a worm were extracted from the foot after the battery, and subsequently a poultice had been applied. No other worm reappeared here, and the inflammation soon subsided. I therefore concluded that the whole of the remaining portion of the worm, which the patient had previously broken, had now come away. On August 3rd about two inches of the worm on the patient's left hand appeared after the bursting of a small abscess. Galvanism was applied to this worm as in the former instances, and a poultice ordered. Galvanism was again applied on August 5th. The worm had protruded four inches, and was now six inches long. On August 6th the protruded portion of the worm was about twelve inches in length. The battery and a poultice were applied, and in the evening the entire worm was extracted whole. There being now no signs of the presence of any other worms, the patient was discharged from the hospital."

PERISCOPE OF OTOLOGY.

By Dr Kirk Duncanson, Senior Surgeon to the Eye, Ear, and Throat Hospital, 6 Cambridge Street; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

The Significance of the Transmission of Sound to the Ear through the Tissues in Aural Disease, by Samuel Sexton, M.D., New York.—In a highly interesting and instructive paper, read before the American Otological Society at their meeting of 17th July 1883, Dr Sexton points out how, in the normal ear, sound-waves are conveyed by the healthy sound-transmitting apparatus of the ear, almost exclusively to the auditory nerve, thus practically excluding sound impulses from all other channels (tissues) of transmission and avoiding confusion. The aërial or natural conduction of sound-waves may be interfered with through changes brought about by disease in the sound-transmitting apparatus. When the auditory nerve takes cognizance of sounds hitherto excluded from it by the peculiar arrangement of the sound-transmitting media, these unpleasant and strangely sounding undulatory vibrations are received through the osseous, muscular, and other tissues. This altogether anomalous hearing, which may exist for a time continuously, or may be interrupted, as it were, by almost normal hearing, is for the most part dependent upon the passage of sound to the auditory nerve through both aërial and tissue media at the same moment. An extremely confusing and disagreeable effect is produced, owing to the increased intensity of sound thus partly heard coming through the better conducting medium of the tissues, whilst the definition of an exclusively aërial transmission is wanting. As is well known to otologists, hearing may thus become a very painful experience. If the patient then hears his own voice autophonously, he feels that it has been much altered, or is not intelligible to others; indeed, it seems to be unrecognisable to himself even. The discomfort may be increased by tinnitus aurium, arising from the circulatory movements taking place near enough to the ear to be heard. Loud noises, such as the passage of railway trains, owing to the better transmission of their more profound impulses through unaccustomed media of approach, fall upon the nervous centre of audition like a blow, and thus give rise to dysacousma. It being doubtful if the perceptive sense of hearing be increased by labyrinthine inflammation, we may suppose that so-called hyperæsthesia of the auditory nerve consists in the painfulness of the impression made by sound on the perceptive centre. If this be true, inflammation of the perceptive filaments of the auditory nerve in the labyrinth alone would scarcely be expected to increase the hearing power. On the other hand, it would be difficult to determine what degree of labyrinthine inflammation was necessary to impair the perceptive functions. Labyrinthine inflammation, viewed from a clinical point of view, is doubtlessly nearly always consecutive to middle ear disease; but whether existing independently or in conjunction with middle ear trouble, the transmission of sound would be more effectually performed by means of aërial conduction as regards intelligible perception. In middle ear disease, however, the vibrating tuning-fork would be better heard through the tissues inversely to an increasing defect in aërial transmission. Even if the perceptive apparatus were alone affected, the tuning-fork would be best heard by aërial conduction, since the transmitting apparatus affords the better conduction, and at the same time interferes with osseous conduction. But cases of labyrinthine disease alone are rare, and it is difficult to establish the fact that no middle ear disease exists in any given instance. Conclusions:—1. When the vibrating tuning-fork, placed on teeth or vertex, is better heard through the tissues on one side, it simply indicates that the better ear excludes, wholly or in part, such (tissue) transmission, but it does not prove that the auditory nerve in either ear is affected. (Of course, if the nerve of audition be gravely affected, sound will not be heard by any method of conduction.) 2. If the conductive mechanism is absent or greatly damaged in one ear, while the other remains more or less normal, aërial transmission will be found to be ineffectual in the diseased ear, while the tuning-fork, allowed to vibrate as before, will therefore be best heard in the diseased ear, and its vibrations will be almost entirely excluded from the healthy ear. 3. In deafness from labyrinthine disease, pure and simple, the middle ear being normal, the tuning-fork would be best heard, if heard in any degree, by aërial conduction, because bone conduction would be excluded. (In those extreme cases where destructive disease of the nerve has taken place, impulses of sound may be appreciated irrespective of either the transmitting or labyrinthine structures; thus the deaf-mute is conscious of the sound of thunder, artillery, drums, stamping with the foot upon the floor, and the like.) 4. If the above deductions be true, we may conclude that the tuning-fork is of less value than has been supposed in the differentiation of aural disease. In the interesting discussion which followed, Dr C. H. Burnett of Philadelphia, Dr Holt, Dr Andrews, and Dr Kipp of Newark took a part, Dr Burnett stating—in which most of the others concurred—that he also had felt the increasing want of reliance in the tuning-fork, because he was unable to rely upon the answers of the patients. In reply to a remark of Dr Andrews, viz., that when a sound ear is closed the vibrating fork on bones of the skull or teeth is better heard than when the ear is open, Dr Sexton said, "Undoubtedly, for under such circumstances the aërial conduction is improved." No doubt much difficulty exists with our patients and their answers to the use of the vibrating tuning-fork as a means for diagnosing the hearing power; but other tests are not free from difficulty, and the vibrating tuning-fork is of great help in marking the progress of a case, especially where the labyrinth has been affected. We would refer our readers to a *résumé* of an interesting paper by Dr Roosa of New York on "The Tuning-Fork in the Differential Diagnosis of Diseases of the Middle and Internal Ear," in the Periscope of Otology in this Journal for Jan. 1882, pp. 658, 659.—*Transactions of the American Otological Society*, 16th Annual Meeting, 17th July 1883, Vol. III., Part 2.

TUBERCULAR SYPHILIDE OF THE EAR.—Dr Sexton reports and figures three cases of tubercular syphiloderm of the auricle, which had been sent to him for treatment. It is a tertiary lesion met with late in syphilis; it is not liable to suppurate, and the loss of tissue, when present, is due to interstitial absorption. It is stated by Bumstead and Taylor (*Venereal Diseases*, p. 729, Philadelphia, 1879) that it is met with in cases that have not been thoroughly treated at the onset. The tubercles begin on the posterior part of the auricle, at the point of junction between the auricle and the head (Burnett, *Treatise on the Ear*, pp. 232, 233). They slowly increase in size and thickness until, when fully developed, they have a diameter of from half an inch to an inch, diffused throughout the tissues of the pinna. The treatment consisted of the administration of the bichloride or biniodide of mercury, combined with iodide of potassium, internally, without local medication, under which the disease speedily and satisfactorily disappeared, leaving very slight traces on the auricles. The disease resembles some cases of eczema, lupus, and epithelioma, in some of their forms, of the auricle, but the more apparent symptoms will leave little doubt in the mind as to diagnosis when a case is under observation. Buck reports a case in his work on *Diagnosis and Treatment of Ear Diseases*, p. 51, Wood's Library, New York, 1880, which he has diagnosed as an epithelioma, but which, from the local appearances described, might be taken for a tubercular syphilide.—*Journal of Cutaneous and Venereal Diseases*, Vol. I., No. 9, June 1883, p. 257.

A CASE OF PRIMARY EPITHELIOMA OF THE AURICLE.—Dr Seely read the history of the following case of epithelioma, occurring primarily in the auricle, before the Sixteenth Annual Meeting of the American Otological Society, exhibiting the auricle itself and microscopic sections:—The patient, æt. 60, an inmate of the Soldiers' Home, Dayton, O., stated that six years ago, while asleep, he was bitten on the ear by a rat. This wound, though treated in various ways, never healed, and on admission to the Medical College, Ohio, 6th Feb. 1883, it presented a large, sensitive, readily-bleeding sore on the right auricle. During the last year the growth had increased rapidly, and bled very freely when irritated, and the patient had an anxious and exhausted appearance. The entire auricle, except the lobule, was swollen and reddened, and the skin behind the ear was for some distance reddened, but not infiltrated. The glands were not enlarged. The point of the original wound was near the summit of the helix. Dr Seely removed the entire auricle with Paquelin's thermo-cautery, the hæmorrhage being but slight. The wound left was covered with boracic acid, and kept so from first to last, so the suppuration was but slight, and the patient was dismissed in five weeks. The orifice of the meatus, not having been touched, retained its normal calibre. Dr H. Knapp of New York stated that it was rare to see epithelioma arising from trauma. Dr Seely thought it generally accepted that epithelioma is due to trauma, and asked Dr Knapp what he would regard as the cause in epithelioma of the lip, for example. Dr Knapp said that the disease in that case might be due to constant irritation of the lip, but that is not traumatism as the term is generally understood. Dr Seely regarded it as the perfection of trauma. He thought the interest of his specimen consisted in the disease appearing where epithelioma is not likely to develop, and where trauma is not likely to occur. If the growth had appeared in the meatus auditorius the fact would not have been so peculiar, or if it had developed upon the lip or eyelid, as upon the summit of the helix. The paper is illustrated with two well-executed woodcuts of the anterior and posterior surface of the auricle, and a woodcut of a microscopic section through the cartilage, in which the cartilage appears very healthy and unaffected by the disease.—*Transactions of the American Otological Society*, Vol. III., Part 2, p. 117.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

LICHEN RUBER OF HEBRA, AND LICHEN PLANUS OF WILSON.—Dr Robinson, already well known by his microscopical researches on sycosis, psoriasis, and tinea tonsurans, has taken up the subject of lichen ruber and lichen planus, and has adduced additional evidence which may quite change our views as to these diseases and their relation to each other. Lichen ruber is a rare disease in America. Dr Robinson has only had the opportunity of investigating one case. Lichen planus is frequently met with. *Lichen ruber* of Hebra.—He describes this as occurring in two forms. In the one, at the commencement, the papules—which are isolated, slightly scaly, and millet-seed sized—are disseminated, of a bright or brown-red colour, very dense in consistence, conical in shape, and having the apex covered with a firmly adherent, dry, white scaliness which gives a rough feel to the touch. In the other they are also disseminated and of similar size to those of the preceding form, but are pale red in colour, of a waxy, shining appearance, the surface smooth, rounded, and having a small central depression. This central depression corresponds to the orifice of a hair-follicle. The eruption may appear on any part of the body, but generally commences on the thorax or abdomen, and afterwards extends. The papules preserve their original dimensions during their entire existence. New papules form between or around those already present, become more and more closely aggregated, till at last the eruption appears as a connected, red, infiltrated patch, covered with scales, and having a dry, rough, uneven surface. At the periphery of such a patch or area characteristic individual papules are always to be observed. The papules never undergo any changes except resolution from cessation of the formative process, or atrophy from degeneration of the elements forming the papule. The eruption appears without prodromal symptoms, and may develop without the knowledge of the affected person. During the first stage and subsequently there may be considerable itching, but this bears no relation to the intensity of the eruption. Untreated or wrongly managed, the disease assumes the serious aspect described by Hebra and proves fatal. When removed by treatment, it is not liable to return, and if not very extensive it may disappear spontaneously. The histological changes which are observed in the recent papule are principally expressed in the horny layer. Here there is a great increase in thickness from increase in the number and size of the component elements—not a true hyperplasia, but an increase from a paratypical process, producing a thickening of this layer. This thickness is also especially present at the orifices of the sweat-ducts and hair-follicles. The changes in the rete and corium are slight in amount, and there is an entire absence of any actual exudation, emigration, or change to an embryonic condition of the fixed elements of the corium—conditions which indicate an inflammatory process. In papules which have existed for a considerable length of time there is a continuation of the processes observed in the recent papule, and afterwards retrograde changes leading to atrophy of the part; or there is a return to the normal condition by cessation of the pathological process. The dilatation of the bloodvessels and the number of emigrated corpuscles, though greater than in the recent papule, are yet not sufficient to denote any active process. In lichen ruber the principal and primary changes occur in the corneous layer. It is not an inflammatory disease, but arises from a continuous collection of epidermic cells, from an anomaly in the process of their production and casting off; and these cells, by pressure on the underlying tissues, produce the other changes in the rete and corium. With the exception of arsenic, there is no known preparation, either applied externally or given internally, that has any effect on the course of the disease. Arsenic alone is to be relied on, and if given in sufficiently large doses, and its use persisted in, the eruption will disappear. *Lichen planus* of Wilson.—This consists of papules remarkable for their colour, shape, tendency to arrangement in groups, situation, local and chronic character, and the pigmentation they leave when they subside. Their colour is dull red, more or less vivid, and suffused with a lilac tinge. A slight hyperæmic areola is present at the base of recent papules. When very small they are roundish in shape, when fully developed are generally angular in outline, and rise abruptly from the normal skin, though only slightly elevated above its level. They vary in size from one to three or four lines in diameter, and have a flat, smooth, shining surface, frequently umbilicated. The papules are covered on their surface by a thin layer of horny, transparent cuticle, which is not a scale and neither separates nor exfoliates. If the eruption is diffuse and aggregated, there is some desquamation and scaling, especially if the part has been irritated, and appearances somewhat resembling a small diffuse patch of lichen ruber or of chronic, dry, scaly eczema or psoriasis show themselves. The papules are either discrete or aggregated, yet tend to form larger or smaller groups, which after a time may be seated on an inflamed and infiltrated base. A single papule may spread by peripherical growth till it has reached the size of a small pea, but a large patch is never formed by peripherical growth of a single papule—as occurs, for instance, in psoriasis. The eruption is generally symmetrical, and appears especially on the anterior surface of the forearms, just above the wrists. It may, however, be found elsewhere, especially on the lower part of the abdomen, the calves, and round the knee. It has been observed on the palms and soles, on the penis, and mucous membranes of mouth and fauces. The course of the papules is very chronic, and they leave deep pigmentation and occasionally slight atrophy. There is generally very little itching, but it may be intense. The general nutrition is never affected, no matter how long the eruption lasts. When the papule is examined microscopically, the corneous layer in the region of the papule is almost entirely absent, consisting only of one or two layers of dry, flat, horny cells. This was found in all sections of both recent and old papules. Outside the papule the horny layer is of normal appearance and thickness. The rete mucosum is thickened in some places, especially in the central portion of the papule area. The papillæ and upper part of the corium are occupied by a sharply limited, dense collection of round cells. The bloodvessels at the periphery of this collection are dilated and crowded with corpuscles, while a considerable number of emigrated white blood-corpuscles are present directly around the vessels. The deeper portion of the corium appeared normal, except that some of the bloodvessels were dilated and surrounded by a few emigrated corpuscles. The hair-follicles and sweat-ducts were normal, except that round the sweat-ducts the cell infiltration generally extended deeper than in other parts. In all of the papules examined a sweat-duct was found near its centre; and its presence, and the absence here of so much of the corneous layer, seemed the chief causes of the umbilication. The hair-follicles had no influence in determining the situation of the papules. Lichen planus papules are thus due to a circumscribed inflammation of the papillæ and upper part of the corium, and any changes in the epidermis are secondary to the changed nutrition, the result of this localized inflammation. The dark red colour of the papules is due to the passing out of red blood-corpuscles, as also occurs in the dense cell infiltration in connexion with syphilitic papules. As regards treatment, in many of the subjects of lichen planus the general nutrition of the body is below a normal physiological standard, and tonics with appropriate diet are indicated. In other cases the eruption seems to be the only pathological condition present. Alkalies, especially the acetate or citrate of potass, with tonics, have been found to be of service in some cases. In one case, reported by Dr R. W. Taylor, immediate benefit followed the administration of 20 grains of chlorate of potass dissolved in 4 ounces of water, given fifteen minutes after meals, and followed fifteen minutes later by 20 drops of dilute nitric acid in a wine-glassful of water. Arsenic does not seem to have any special effect in this form of eruption. Beyond preventing itching, local applications do not seem to influence the eruption. After a general survey of the whole question, Dr Robinson says, "We feel justified in concluding that lichen ruber and lichen planus are two entirely distinct diseases of the skin, and that the grounds for regarding them as but two forms of the same disease are altogether untenable."—*New York Medical Record*, Oct. 20 and Nov. 10, 1883.

THE TREATMENT OF ECZEMA.—Dr M'Call Anderson recommends, as the best local means for the removal of limited eczematous eruptions, the employment of blisters. The agent which he is chiefly in the habit of employing at the present time, and which does not produce so much pain as the glacial acetum cantharidis—also a good preparation—is Smith's emplastrum cantharidinis liquidum. After shaking the bottle, a paint-brush is dipped in the mixture, and the affected part painted with it immediately, as it dries up very quickly. A poultice is applied for an hour or two, and in five or six hours the blister is fully formed. It is then dressed like an ordinary blister and allowed to heal. One application is often sufficient to remove the eruption, but, if necessary, it may be repeated weekly—the crusts which have formed being previously removed. In *infantile eczema* the same principles of treatment as in the adult are to be carried out. Soothing rather than stimulating applications are to be preferred in their case, bearing in mind the tenderness of the skin in young children, and the sensitiveness of their nervous systems, and, in any case, powerful local stimulation is to be avoided. If there is any digestive derangement, an occasional dose of gray powder, or from half a grain to a grain of calomel (in children from nine months to two years old), is often of service. In chronic cases, and when the digestive and other organs are in a satisfactory state, arsenic frequently yields most excellent results. *Eczema of the Head.*—Cases are frequently met with in which ringworm of the head is complicated with eczema, and the latter being the more prominent feature, the ringworm may be overlooked. The hairs, in cases of eczema, should therefore be carefully examined with the eye at least, checked, if necessary, by the microscope. In chronic cases occurring in adults, and rebellious to other treatment, the use of a vulcanized indiarubber cap, or shaving the head, and the application of iodine, blisters, etc., is to be recommended.—*Journal of Cutaneous and Venereal Diseases*, August and September 1883.

FALLACY ABOUT SKIN DISEASES.—Dr Spender remarks:—"One of the professional and popular fallacies about skin diseases is, that they are not to be 'driven in,' or, in other words, are not to be cured, lest worse internal troubles should follow. How many babies have been made miserable by this fanaticism, and been doomed to suffer a running dermatitis of the head, or even of the whole body, until the last stage of malnutrition has been reached and death has nearly closed the scene! Hebra laughs heartily at this grandmotherly scheme of physiological pathology. Do we ever say that we must not try to cure an old muco-purulent bronchitis lest the *sputa* be driven inwards?"—*Practitioner*, June 1883.

PERISCOPE OF SYPHILOLOGY.

By FRANCIS CADELL, F.R.C.S. ED.

THE SIMULTANEOUS OCCURRENCE OF CHANCROID AND CHANCRE.—That chancroid and the initial lesion of syphilis can occur at the same time in a person who has exposed himself has been both asserted and denied. In the *Medical News*, October 20, 1883, Dr John Fergusson gives the following case, which he believes will set the possibility of this dual occurrence beyond doubt:—Mr J. C., a student known to the author for years, and on whose word the utmost reliance could be placed, called on him and remarked that he thought he had been "caught." Three nights before he had visited "two houses." He said he had never been with a woman previously. That he was never out again was known for a fact. At first there was considerable irritation, and by the end of the week a well-marked chancroid. By the end of four weeks the sore was healed. Some five or six days from the date of the last call regarding the local sore he came again, and stated that he thought he felt a hard nodule on the opposite side of the penis, just behind the glans. This initial sore gradually took on the characters of the indolent ulcer, with a hard, widely-extended base. In due time the inguinal glands enlarged, the rash on the skin appeared, and there were great loss of appetite, severe headache, much cachexia, and a good deal of fever. There was no doubt as to the real character of the two sores, for the first was a most typical "soft sore," while the second was followed by constitutional syphilis. The patient had frequented on this one occasion two places of ill-fame, and succeeded in bringing to the author the woman he had been with in the first place. On examination a plentiful supply of chancroids were found, but no appearance of syphilis. It was therefore concluded that the young man contracted his local sores from the person above mentioned, and that his severer disease was due to the intercourse with the second woman. It was also proved that another student contracted syphilis from this second woman about the same date as did Mr J. C.

THE MICROCOCCUS OF GONORRHŒAL PUS.—In the *Medical News*, March 24, 1883, Dr Sternberg has a second paper on this subject. In the first paper he gave in detail the experiments which led him to the conclusion that the infective virulence of gonorrhœal pus is not due to the presence of the micrococcus which is found in a certain proportion of the pus cells, and which, so far as his observations went, is constantly present in the pus of specific urethritis. He believes that the same micro-organism will be found in the pus of *non-specific* urethritis; but as this form of urethritis is extremely rare, he has not been able to verify the truth of his impression. The object of the present paper is to call attention to a later claim which has been made in support of the hypothesis of Neisser, with reference to the etiological *rôle* of this micrococcus, based upon evidence of a different kind. In the *Medical Record*, December 16, 1883, he found the following (p. 687):—

"Dr Leistikow thinks he has confirmed, by a series of experiments, the discovery made by Neisser of the presence of a special form of bacteria in gonorrhœal discharges. In the first stage of a gonorrhœa, when the discharge is thick and abundant, but few of the bacteria can be seen. They exist, however, in great numbers in the thin and scanty secretion of the later stages, sometimes even when the disease has existed over a year. In the treatment of gonorrhœa the author employs an injection of corrosive sublimate, which Koch has found most fatal to the various forms of bacteria. He uses a solution of 1 part to 20,000, 1 in 10,000 being found to be too irritating. In private practice a still weaker solution of 1 part to 30,000 is employed. The injections are made three times a day, and should be continued for three or four days after all discharge has ceased. The bacteria disappear, or are greatly diminished in number, after one day's use of the injections, but return again if the latter are discontinued too soon. Treatment by injections should not be begun until after the acute inflammation has subsided." —*Deutsche Medicinal-Zeitung*, September 7, 1882.

We are first informed that Dr Leistikow thinks he has confirmed the discovery made by Neisser of the presence of a "*special form* of bacteria in gonorrhœal discharges." But the author has already shown that this micrococcus is identical morphologically with that found in urine undergoing alkaline decomposition; and since his paper was written he has had under observation a micrococcus from quite a different source, which also cannot be distinguished by the highest powers from that found in gonorrhœal pus. He has also made numerous experiments relating to the germicide power of mercuric bichloride upon this micrococcus, and is able to say very positively that this reagent does destroy its vitality in the proportion used. But, he asks, is the gonorrhœa cured? He affirms that the injections of corrosive sublimate have no specific curative effect upon gonorrhœa, as no doubt would have been the case had the gonorrhœa been of bacterial origin.

PERISCOPE OF OPHTHALMOLOGY.

By George A. Berry, M.B.

Sympathetic Ophthalmia produced Experimentally.—The mass of facts which tend to support the view that the channel through which inflammation spreads from one eye to the other is the optic nerve is slowly but steadily increasing. Deutschmann in Göttingen (*Græfe's Archiv*, xxix. 4) has succeeded in producing what appears to be a true sympathetic inflammation in rabbits by injecting into the one eye a fluid containing the spores of *Aspergillus fumigatus*. Previous experiments, an account of which he published in the same *Archiv* a little more than a year ago, had enabled him to demonstrate a papillitis of the other eye following this inoculation of the first. Many who admitted the correctness of the experiments were yet naturally unwilling to support the author's view that the nature of the inflammation of the optic nerve was the same as that which we recognise as sympathetic in man. By repeating four or five times, at intervals, the injections in the first eye, he has been able to cause not only a papillitis, but a severe inflammation of the uveal tract in the other, a fact which, if the explanation be correct, is not unlikely to throw considerable light on the whole of this difficult subject.

ON A FORM OF PHOTOPSIA IN THE REGION OF THE POINT OF FIXATION.—Mayerhausen describes a subjective visual sensation which has been very little noticed, and which may possibly turn out to be of clinical importance, besides being of interest physiologically. The conditions for its appearance in him are that he has made use of his eyes for six or eight hours a day for several days previously, then, after running for some time pretty fast, he suddenly becomes conscious of a small clear spot projected (always excentrically) in front of him. On continuing to run, this is followed by others arranged round the point of fixation, and eventually these coalesce radially and give rise to a series of bright and ill-defined lines disposed radially and branching dichotomously at their outer ends, the whole figure not extending further outwards than from 10 to 15 degrees, and always occurring simultaneously in both eyes. Pressure on the globes increases the distinctness of the photopsia, which disappears in from half a minute to one minute if he stands still, but reappears on continuing to walk after it has once made its appearance. Mayerhausen believes that it can be nothing other than a pressure phenomenon (Druckbilderscheinung), and the question comes to be, What vessels cause it? According to Hesse, whose results are confirmed by His, the capillary network in the retina is arranged in two layers, an inner in the nerve-fibres, and an outer in the inner nuclear layer. Mayerhausen believes that the appearances described are produced by pressure on the nervous elements by the vessels when overfilled in the outer layer. A photopsia of this nature, occurring without such marked cause as prolonged use of the eyes followed by severe physical exercise, is indicative of vasomotor disturbances or neurasthenia.—*Græfe's Archiv*, vol. xxix. 4.

SOME POINTS IN THE ANATOMY OF THE OPTIC NERVE.—Vossius (*Græfe's Archiv*, xxix. 4) comes to the following conclusions from an extensive series of anatomical investigations into the anatomy of the optic nerve:—(1.) The point of entrance of the central vessels into the nerve is always distant from 10 to 12 mm. from the globe, and in the outer and lower quadrant. (2.) There is therefore a torsion of the nerve of at least 90°, as the fœtal fissure lies to the under and inner side. (3.) This torsion of the nerve supports the view that the macula is the remains of the fœtal fissure of the eye. (4.) Besides the torsion of the nerve, the globe also makes a torsional movement; this is most apparent in the position of the superior rectus, which lies much more laterally in the fœtus than in the adult. (5.) The arterial supply of the intracranial portion of the nerve is principally from the artery to the corpus callosum. In the optic canal there is a special vascular and interstitial fibrous tissue development; the arteries come from the ophthalmic or its muscular branches, their trunks lying to the under surface of the nerve. The venous blood is carried by the vena centralis posterior to the sinus cavernosus; the vein leaves the nerve just as it enters the optic canal. (6.) The nourishment of the posterior orbital portion of the nerve is partly effected by a branch running backwards from the central artery. (7.) The circulatory arrangement of the portion of the nerve in the optic canal, as well as the greater development of meningeal tissue, etc., make that part most prone to inflammation; and the reason why the inflammation affects more seriously the central part of the nerve section, that portion in which the macula fibres course, is probably because the capillary net is there most extensive, whereas the trunks of the veins lie on the peripheral parts.

OPTIC NERVE-STRETCHING.—Landesberg in Philadelphia gives his experience of the stretching of the optic nerve in *Græfe's Archiv*, vol. xxix. 4. He performed the operation 21 times on 13 patients. The cases are all given *in extenso*. The results seem to be, no improvement at all in 12 cases, a transitory improvement in 5 cases, and some slight permanent improvement in the remaining 4, one of which had shown improvement previously under some other treatment. The greatest improvement, and one certainly not inconsiderable, if we may rely on the examination, was from V = fingers at 1′ to V = fingers at 11′. In another case, where both nerves were stretched, the vision rose from V = fingers at 3′ to V = fingers at 11′ right, and V = fingers at 1′ to V = fingers at 9′ left. This improvement remained until death 6½ months later. The death occurred from spinal disease, which progressed steadily all the time. In some cases the stretching seemed to cause some return of vascularity to the nerve, which appeared less white on ophthalmoscopic examination. Altogether these results do not sound encouraging for the operation; but, as is remarked by Landesberg, what can we expect from an operation the performance of which depends on the subjective feeling of the operator, for which there is no scientific basis, for which, again, we can recognise no definite indication, and which, lastly, we can only be justified in performing in extreme cases of atrophy. Landesberg's first operations were confined to cases in which all that remained to the patient was perception of light; afterwards he extended it to cases in which there was a small fraction of visual acuity left, and these certainly seem to have been not so hopelessly unsuccessful. He considers the operation, as descibed by Wecker, as free from danger.

IODOFORM IN DISEASES OF THE EYE.—Alker, whose cases were taken from the clinic at Giessen, concludes that iodoform, used as a fine powder, or as an ointment in the proportion of 1 to 15 of vaseline, can be well tolerated as a local application to the eyes in most individuals; that it is especially of service in hypopyon keratitis, where it often obviates the necessity of performing a Sæmisch's section; that it is useful as an antiseptic in all fresh wounds of the eye; that it aids in clearing up strumous humours; but that it is useless in cases of purulent conjunctivitis, or at any rate does not give as good results as the ordinary methods of treatment with antiseptics and caustics.—*Græfe's Archiv*, xxix. 4.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. Milne Chapman.

Præ-fœtal Dilatation of the Vulva as a Means of preventing Rupture of the Perinæum (Prof. Dumas, reprint from *Montpellier Médical*).—The writer first criticises the various methods of supporting the perinæum, and comes to the conclusion that none of them are either scientific or satisfactory. With Dr Duke's method of stretching the perinæum during the pains (*Brit. Med. Journ.*, 10th March 1883) he expresses himself as not satisfied, and states that he believes such interference may occasionally lead to the occurrence of the accident it was designed to prevent. He draws attention to several cases of primiparæ noticed by him, where the vulva became quickly dilated, while the time taken for the head to reach the vulva had been long, and this he explains by the presence of a voluminous caput succedaneum in such cases, which leads to dilatation of the vulva while the head is still engaged dilating and passing through the vagina. The procedure he recommends, and which he designates "præ-fœtal dilatation of the vulva," consists in introducing two or more fingers and the thumb of the right hand into the vagina, and fitting the hand on to the head, not exerting any force on the approaching head, but rather allowing it to push the hand in front of it, and thus take the place of the caput in such cases as he describes.

Experimental Researches on the Transmission of Infective Diseases, especially Splenic Fever, from Mother to Fœtus (Straus and Chamberland, from Pasteur's laboratory, *Archives de Physiologie*, Bd. 1, 1883).—Previous experiments by Brauell and others seemed to show that there was no such transmission, and that the placenta presented an impassable barrier to the poison of splenic fever, which thus differed from such diseases as smallpox vaccination or syphilis, the transmission of which is well known clinically. The present writers first experimented to see whether ordinary secreting glands offered an obstacle to the passage of the poison. This they did by examining the urine and bile of affected animals, and they found that these contained the poison. Proceeding to inoculate pregnant animals, they found that on examining, by the most approved methods, the blood of the fœtus, no bacilli could be detected. In a section of placenta the uterine vessels were found filled up with them. But on cultivating the fœtal blood occasional positive results were obtained. Sometimes the blood of one fœtus out of a litter was alone affected, sometimes all were equally poisoned. Hence the conclusion is come to, in opposition to that of Brauell already quoted, that the Bacillus anthracis is, like other infection poisons, capable of piercing the placental separating structures, but only to a small extent.

Surgical Operations on the Pelvic Organs of Pregnant

WOMEN (Matthew D. Mann, Buffalo, N.Y., reprint from vol. vii. of *American Gynecological Transactions*).—The writer gives notes of 90 such operations, with 20 abortions and 4 deaths. He adds, "As a great deal more material is necessary in order to decide whether these conclusions are correct, it is earnestly requested that those having notes of cases bearing on the points discussed in this paper will send them to the author." He sums up his conclusions in the form of propositions, thus:—"1. Pregnancy is not so decidedly a bar to operations on the pelvic organs as is generally supposed. The results, however, vary with the operation and the organ operated upon. 2. Union of denuded surfaces is the rule, and the cicatricial tissue formed during the earlier months of pregnancy is strong enough to resist the shock of labour at term. 3. Operations on the vulva involve very little danger either to mother or child. 4. Operations on the vagina are likely to cause severe hæmorrhages, but are not otherwise dangerous. 5. Venereal warts, and vegetations of large size and non-syphilitic, are best treated by removal, whether they occur in the vagina or are confined to the vulva. 6. Applications of nitrate of silver and astringents of this class may be made with safety to the vagina and cervix. Diffusible poisons, like carbolic acid and iodine, should not be used pure or in strong solutions for such applications. 7. Operations upon the bladder and urethra are not dangerous, or likely to be followed by abortion. 8. Operations on the rectum involving the sphincter ani, even if slight in their character, are dangerous. 9. The operation for vesico-vaginal fistula should not be undertaken during pregnancy, as the dangers of hæmorrhage and abortion are considerable. 10. Plastic operations on the cervix and perineum may, if necessary, be undertaken in the earlier months of pregnancy with a fair prospect of success, and with a good chance that the results may not be impaired by labour. 11. Small polypi of the cervix may best be treated by torsion or strong astringents. If cut, there is some danger of abortion following. 12. Large polypi may, if causing hæmorrhage, be removed at once, with a fair chance of good results. If not doing any harm, then removal is best left until near the close of pregnancy. 13. Cancer of the cervix discovered during pregnancy should, if possible, be removed at once."

PHYSOMETRA, WITH HISTORY OF A CASE (Yarrow, *American Journ. of Obstetrics, etc.*, August 1883).—The writer was summoned "to perform the Cæsarean operation on a negress, 46 years of age, who had previously borne children, and who stated that she had had all the symptoms of pregnancy, but that she had passed her time by four months. As she was suffering from severe expulsive pains, the attending physician feared a rupture of the uterus. The writer found the abdomen to be occupied by a large rounded tumour, over which, however, there was resonant percussion. He introduced a uterine sound through a speculum, some difficulty being experienced at the inner os, and immediately there was an escape of odourless gas and a disappearance of the tumour. A more careful examination showed that the cervical canal had previously been the seat of extensive inflammation and had probably been partly occluded. There are then given references to many recorded cases, the writer stating that he has laid under contribution the entire library of the Surgeon-General's office.

ON THE ADVANTAGES OF DRAINAGE IN SUPPURATIVE PELVIC PERITONITIS AND CELLULITIS (Garnett, *ibid.*, October).—The writer quotes from Emmet to the effect that "many of the disappointments and bad results so often complained of in the management of diseases of women, in general practice, may be attributed to the existence of unrecognised cellulitis," and reports very fully a case which had baffled five medical attendants, one after another, and which finally recovered when drainage into the vagina was established. Previous openings had been made from the abdominal surface into a large irregular cavity, from which a very considerable quantity of pus had been discharged. Drainage-tubes had been kept in and injections used, but it was only when an opening was made from the most dependent portion of the sac into the vagina that improvement and ultimately cure occurred.

ABSORBENT COTTON AS A DRESSING FOR THE UMBILICAL CORD (Babcock, *ibid.*) — Here the recommendation is made that accoucheurs should carry a quantity of absorbent cotton in their midwifery bags, and should employ a pad of it ungreased to dress the cord with, leaving it thereafter entirely alone.

TWO CASES OF ASPIRATION OF DERMOID CYSTS FOLLOWED BY INFLAMMATION (Mary Putnam Jacobi, M.D., *ibid.*, November).—The histories of two cases are given. The aspiration in both cases was per vaginam, and was followed immediately, in the first case, which recovered, by severe inflammatory symptoms, and in the second case, which died, by similar symptoms, which, however, came on more slowly. In this case, from the autopsy it appeared that a primary inflammation and suppuration of the cyst cavity had occurred immediately after the tapping, and that this had caused by extension an adhesive peritonitis. Attention is drawn to the facts—1st, that inflammation was excited by so minute a traumatism, guarded, moreover, by antiseptic precautions (in connexion with this the following note at the end of the paper is important:—" It is noticeable that both operations had been performed in a hospital, where the aspirator had been standing a number of months"); 2nd, that symptoms of inflammation appeared in both cases about 48 hours after the operation, continued with moderate severity until a menstrual hæmorrhage set in, one week in advance of the time, then subsided, did not exacerbate at the succeeding menstrual period, but returned with great intensity at the third menstruation after the operation. After discussing Koch's experiments on the vitality of bacteria, the writer arrives at the conclusion that ordinary methods of cleansing an aspirator are insufficient, and that "the aspirator needle should be immersed for 48 hours, previous to the operation (of tapping cysts supposed to be dermoid), in a 5 per cent. solution of carbolic acid." References are given to a series of cases illustrative of the danger of aspirating abdominal cysts.

TAIT'S OPERATION (*ibid.*)—Two cases of the above operation are reported as having been communicated to the Obstetrical Society of New York. In the first, operated on by Dr Thomas, the patient, aged 30, had suffered from pain in the region of the ovary during her entire menstrual life, and had of late become greatly reduced in health. Both ovaries were cystic, and the right Fallopian tube was much distended with liquid. The second case was operated on by Dr Jones. The patient, aged 32, had never been pregnant, and had suffered during her whole married life from severe dysmenorrhœa. During the last three years she had suffered from pelvic neuralgia almost continuously, referred more especially to the region of the left ovary. Her suffering had compelled her to resort to opium in large quantities. The specimen removed consisted of the left Fallopian tube, distended to the size of an egg, and enclosed with the ovary—which was atrophied—in firm false membrane.

ON THE RUPTURE, SUPPURATION, AND TORSION OF OVARIAN CYSTS (Aronson, dissertation from Frankenhaüser's clinique at Zurich, *ibid.*)—The writer has collected from literature and from the clinique 450 cases, upon which he bases his paper. In regard to rupture, he considers that mechanical influences (examinations, tapping, etc.) are not given sufficient importance as etiological factors, and he believes that they are more frequently to blame than has been hitherto held. Sloughing the writer regards as usually due to bacterial infection, and the clinical similarity of such cases to typhoid fever is dwelt upon. Among the etiological factors in the production of torsion, the writer mentions one as of paramount importance, namely, the condition of the bladder. The paper concludes with a chapter on the prognosis and treatment of such complications. In regard to prognosis, he says "that the ruptures, suppurations, and torsions of the pedicle, occurring by and in pregnancy during parturition and in the puerperium, are comparatively less grave than the ruptures, suppurations, and torsions in dermoid cysts, and the worst may be feared when any of these complications have been produced by tapping" (mortality under such circumstances, 71·43 per cent.)

DISPLACEMENT OF THE LEFT OVARY—BATTEY'S OPERATION—DEATH (J. Iotzi, *American Practitioner*, Nov. 1883).—The patient was 35, and as "her life was a burden to her, and her suffering most distressing to witness," Battey's operation was proposed and performed. The right ovary, which was also removed, was healthy, but the left was inflamed, enlarged to twice the normal size, prolapsed, and adherent to the Fallopian tube, which was therefore also removed. Peritonitis set in on the day following the operation, and increased in intensity till the patient died on the third day.

TWO CASES OF EXCESSIVE VOMITING OF PREGNANCY — ONE FATAL (Stedman, *Boston Med. and Surg. Journ.*, 6th Dec. 1883).

CASE OF TUBAL GESTATION WITH RUPTURE AND SUDDEN DEATH (Gilbert, *ibid.*)

A PEDICULATED TUMOUR OF THE ANTERIOR LIP OF THE CERVIX UTERI (Williams, *ibid.*)

A LECTURE ON SOME FORMS OF PUERPERAL HÆMORRHAGE (Prof. Lusk, *New York Medical Journal*, 20th October 1883).—*Placenta Prævia.*—The writer urges very strongly that when this condition is satisfactorily diagnosed as the cause of hæmorrhage, labour should be induced. When the hæmorrhage occurs between the twenty-eighth and thirty-second week, there is, according to the writer, probably central implantation of the placenta, and " there is no excuse for temporizing, as the child is almost certain to be dead, and the mother alone should be considered." *Accidental Hæmorrhage.* — Here the writer recommends the induction of premature labour by the use of Barnes's bags, whether the hæmorrhage be external or concealed. *Hæmorrhage from Lacerations.* — In cases where the bleeding comes from the bulbous portion of the vagina, the use of styptics is regarded as useless, and it is recommended to pass one or two deep sutures, extending round the two sides of the laceration, and thus bring the bleeding points together—a proceeding which is effectual and not painful. Laceration of the vaginal portion of the cervix the writer regards as of quite common occurrence. He says:—" I make it a rule, after the placenta is expelled, to pass my finger up into the vagina, so that I may know how far the cervix is torn, if at all. It is a great deal better to know of a laceration existing than to discover it only after your patient has had a chill, followed by fever, on the third or fourth day after delivery. If the laceration is left alone the parts will heal, but the edges will not unite; and if the patient has trouble from this source afterward, the edges will have to be brought together by an operation. If the laceration of the cervix is followed by much hæmorrhage, to check this you may use hot-water injections, or put in a cotton tampon soaked in a solution of persulphate of iron, and press it up well against the bleeding tissues of the cervix. But in case there is a good deal of irritation about, healing may be delayed, and the wound in the cervix renders it liable to suck up infected materials, and so is a source of danger. It is always a good plan, therefore, at the time of the laceration, to take a pair of vulsella forceps, and, as an assistant presses down the fundus of the uterus through the abdominal walls, you can draw the cervix down, and then with a needle and thread sew up the wound, as the tissue is now patulous and easy to work upon. In this way you can check the hæmorrhage, and a suture makes the best hæmostatic we have."

SURGICAL PERISCOPE.

By A. G. Miller, F.R.C.S.E.

Professor Hamilton on the Condition of the Urethra and Neighbouring Parts in Acute Gonorrhœa (from *The Practitioner*, September 1883).—Professor Hamilton tells us that in September 1882, while Pathologist in the Edinburgh Royal Infirmary, he had an opportunity of procuring the genital organs of a man suffering from acute and recent gonorrhœa. The man had been stabbed in a brawl, and died a few days after admission to hospital. The following are the words of the author:—"The greater part of the urethra is lined by columnar epithelium. A small portion at the commencement and termination alone have a flat cell covering. . . . In acute gonorrhœa the process is an exaggeration of that which goes on normally. The deep layer of epithelium is unduly stimulated apparently by the action of the irritant applied; its cells divide too quickly. Time is thus not afforded for the complete elaboration of the columnar cells, but an embryonic progeny is thrown off into the urethral lumen constituting the cells of the discharge. . . . On looking at the epithelial surface it will be noticed how extensive the changes are within it. In place of the normal three strata of cells there is in some parts only one; in others a confused mass of rounded and pear-shaped embryonic bodies lies above this. The one stratum which is always present is the deepest of the three, or that which, when looked at from above, in normal circumstances, has a squamous or endothelium-like appearance. . . . It can be thus easily understood why the pus cells in the discharge from the urethra contain, as in bronchitis, only a limited number of columnar cells. These are not developed. The stimulation of the epithelial surface is too great, and consequently those cells which should have gone on to form them are desquamated as soon as they are separated from the parent. The copiousness of the cellular products in the discharge can be easily accounted for when we consider that in most cases the greater part of the urethra is in the condition shown in the figure. The characteristic scalding pain on micturition is also well accounted for. The proper protective covering is destroyed, and the urine in passing along the channel irritates the denuded surface. The mucous glands evidently participate in the disease, in so far as their secretion appears to be much exalted. Their secreting cells are converted into large rounded transparent bodies from the accumulation of mucus within them. The gland channel is also filled with mucus and evidently distended. . . . In the human urethra there is not the same elastic basement membrane as in the bronchi, hence there is nothing to hinder inflammatory exudation in the mucous membrane from passing into the urethral lumen. The mucous membrane in gonorrhœa contains a considerable quantity of cellular effusion. The cells can be seen to be mainly limited to this particular locality, but long rows of similar cells extend thence into the substance of the corpus spongiosum, along channels lined by endothelium, and evidently representing lymphatics. . . . The slight cellular exudation into the fibrous spaces of the mucosa is similar to that seen in acute bronchitis, and I think it much more probable that, instead of the cells being forced out on the mucous surface, they are carried along in the lymph current up towards the nearest lymphatic gland. The direction which the cells follow, moving as they do in lines from the mucosa into the trabecular tissue of the corpus spongiosum, points to the above as being the means by which the cellular effusion into the mucosa is removed. . . . What the condition of the urethra is when the disease becomes chronic and a stricture results I am unable as yet to say. I should think, however, that it is similar to what occurs so often in chronic bronchitis, namely, that the submucous tissue becomes cirrhosed and contracts upon the non-resistent lumen. Here, there being no fixed point, as in the case of the chest, to which this cirrhosed tissue might become attached, the invariable result of such a fibrous growth round the urethra is stenosis. Were the textures of the penis more rigid, there is no reason why a dilatation of the urethra—a true urethrectasy—should not result. The *testicles* showed appearances which were interesting as corroborative of the superficial and epithelial character of the morbid changes in the urethra. . . . On looking at the contents of the tubes, evidences of catarrh similar to those of the urethra are distinctly visible. The layers of epithelium covering the membrana propria have been actively proliferating. The cells formed thereby have been thrown off in great numbers into the lumen of the tube, and have undergone fatty metamorphosis and in some cases complete disintegration. A quantity of granular débris and minute oil-globules have thus resulted, partially occluding the tube. . . . *The epididymis* showed similar catarrhal appearances, but evidently further advanced than in the tubes of the testis. The epithelium had desquamated in nearly every tube, and had become extremely fatty." We are much interested in these researches, and especially in the light that is thrown on, and the explanation given of, the scalding along the urethra during micturition, the extension of the inflammatory process along the lymphatics to the glands, along the epithelial lining membrane to the epididymis and testicle, and its extension also beyond the mucous membrane to the submucous tissue and even into the corpus spongiosum. One can understand now better how a stricture forms around the urethra, and how, according to Professor Hamilton, the result is so different from that which occurs after a similar affection in the bronchi. We see also how the inflammatory action extends by continuity from the urethra to the testicle. Let no one henceforth speak of a swelled testicle or epididymitis as being metatastic. We notice that there was no mention of an inflamed condition of the testicles before death or at the post-mortem examination. We think it probable that there was no evidence at the time. Possibly a certain amount of catarrh of the seminal apparatus is present in many cases of gonorrhœa, and epididymitis is noticed only in those cases where from some cause the affection becomes aggravated.

WHITE SWELLING OF KNEE—TREATMENT RECOMMENDED BY DR LEWIS A. SAYRE (from a clinical lecture reported in the *Philadelphia Medical Times*).—You observe that I am making extension now in two directions, and that I cause no pain, simply because I am making my extension in the line of the deformity, which is from just below the head of the tibia upwards, at an angle, towards the foot, and also extending from the leg parallel with the limb. By this means I prevent the diseased surfaces of the joint from rubbing together, and at the same time relieve him perfectly from all pain. Now, when this extension has been kept up for some length of time, the line of extension may be gradually changed, so that the limb can be brought perfectly straight. . . . Here, then, is your first point of practical importance; you must secure the limb in this position by mechanical means. This can easily be done by the application of weights and pulleys. If you have not mechanical ingenuity enough to devise some means of holding the leg in this position, it is your duty to sit there and hold it until a cure is completed. It is your business to accomplish this result. I do not care how you do it, as long as it is done. This end is, however, easily accomplished by putting a strip of adhesive plaster on either side of the leg, and securing it with a roller bandage, then, with your weight and pulley, make your traction in the line of the limb. You then pass a band behind the tibia so as to bring the leg forward and upward. You can then gradually elevate your first line of traction and depress your second, until you have brought the leg into nearly the straight position. . . . In this case the boy will be placed in bed, with the double extension applied as I have just described, and the actual cautery applied over the coronary ligaments. There will also be a large dry sponge bandaged tightly around the knee (both thigh and leg being well bandaged), which will then be saturated with warm or cold water. The absorption of the water by the sponge will cause additional pressure upon the joint, and by this means hasten the absorption of the deposit around the joint. . . . Now, after the limb can bear firm pressure upon the articular surfaces, you can remove your apparatus; and then is the time when you begin your passive motions to prevent the joint from becoming permanently anchylosed. Make them very gently at first, then with friction and massage endeavour to increase the circulation in order to secure absorption of the deposit around the joint. Day by day you increase these movements, going a little further each day, but not so as to cause inflammation again. After you have gained some movement, make some short, quick movements within the range of your first movement, and on the morrow you make this same movement again, going over the distance gained yesterday quite easily without causing any pain. In this manner you excite a flow of the synovial fluid, and can then secure additional movement. The synovial membrane, remember, only pours out its fluid under irritation; as long as it is quiescent it does not secrete. Now, do not be in too much haste to secure an increase in your movements; just carry them to the point of endurance, then put your splint on and lock it up, following out the same plan day after day. . . . If, in this case, the treatment is conducted as I have told you, it may be that when the disease is cured we may get perfect motion within the joint. Or it may be that the difficulty is associated with a depraved constitution, so that every attempt at passive motion, although the disease itself may be cured, only excites inflammation; then you must stop your passive motion, as I have frequently told you, and compromise the matter by anchylosis."

TIBIO-FEMORAL IMPACTION IN RESECTION OF THE KNEE-JOINT.—Mr Davy, of the Westminster Hospital, in a lecture published in the *British Medical Journal* of the 20th October 1883, recommends a method of performing excision of the knee in cases of deformity that promises to reform the operation considerably. His plan is to impact the lower end of the femur into the head of the tibia. In order to accomplish this, after a sufficient portion of bone is removed from each bone according to circumstances, the femur is bevelled off, and the tibia is hollowed out, or mortised in such a way as that the former shall fit into the centre of the latter perfectly and firmly. The femur seems to be sunk into the tibia an inch or more. The result of this procedure is that the limb becomes fixed immediately and permanently. There can be no shifting or movement of the parts whatever. Of course the limb is considerably shortened. But as the operation is recommended only for those cases where, from extreme distortion, amputation would otherwise be resorted to, the resulting limb, being firm and straight, however short, must always be far better than a mere stump, the result of an amputation. Another advantage of Mr Davy's new operation is that it requires very little after-treatment, and seems to minimize the risk to life. Mr Davy suggests that the same method of procedure may be useful in cases of ununited fracture.

REMOVAL OF THE TONGUE BY MEDIAN DIVISION.—Mr Morrant Baker speaks of the following operation as if it were an entirely new proceeding. But there is nothing which he describes with which we are not already familiar, except the splitting of the tongue with the fingers:—"A gag having been introduced, and any jagged teeth likely to be in the way of the operator having been extracted, two threads are passed through the tongue, about an inch behind the tip and half an inch on each side of the middle line. One of these looped threads is now given to an assistant to hold tightly; and the operator, holding the other, scores the dorsum of the tongue with a blunt-pointed scalpel, exactly in the middle line—extending the 'cut' well through the mucous membrane into the surface of the muscular substance, and dividing the tip freely down to and through the middle line of the frænum. The cut may be extended back as far as the operator deems necessary—say, for an inch beyond the level of the posterior edge of the cancer. He then takes both threads, one in each hand, and, using the forefingers much in the same way that he would for tightening a ligature on a deep vessel, he splits the tongue into two halves. At this stage of the operation the hæmorrhage is usually very trifling, if the operator has taken care to cut along the middle line; and even if he is a little to one side or the other, the divided vessels are small and easily ligatured. The thread which tethers the diseased half of the tongue is now pulled quite taut, either by the operator or his assistant; while the former, with blunt-pointed scissors, snips, as far as he considers necessary, the mucous membrane and muscular fibres which connect the tongue with the anterior part of the lower jaw behind the symphysis, after the manner suggested many years since by Sir James Paget. He then 'runs' the scissors along the floor of the mouth, immediately beneath the mucous membrane, keeping close to the ramus of the jaw, until he has cut, if possible, to a point beyond the level of the posterior edge of the cancer. Then, with his forefinger and occasional snips with the scissors, he frees the tongue as completely as may be requisite from its attachments in front and at the sides and in the floor of the mouth. The chief point aimed at, of course, at this stage of the operation, is to free the diseased half of the tongue in such a manner that it may be surrounded by the loop of the *écraseur* at some distance behind the disease, and without danger of the cord slipping forward so as to embrace the neighbourhood of the cancer, and much less the cancer itself. This is by far the most important part of the operation; and, should the surgeon be in doubt about his having sufficiently freed the tongue with his finger, he should again introduce the scissors and cautiously divide any muscle or other structure which prevents the due loosening of the tongue. Having now freed the tongue sufficiently, one, and sometimes two, blunt curved needles (of the pattern shown) are now made to perforate it at some distance, an inch, or more if possible, behind the cancerous mass; and the loop of the *écraseur* is now slipped over the diseased half of the tongue and adjusted behind the needles. With the screwing-up of the *écraseur* this part of the operation is now completed, with the exception that, very commonly, at least when whipcord is employed, the main vessel and some other tissue, perhaps nerve-fibres, are pulled through the end of the *écraseur* after the softer substance of the tongue has been crushed through. Under these circumstances, a double ligature should be passed with an aneurysm-needle, and the strand of vessels and nerves divided between the two knots, when the *écraseur* will, of course, at once come away, and the main vessels will be left on the face of the stump securely ligatured. In the event of both sides of the tongue requiring removal, an *écraseur* should now be slipped over the other half after it has been sufficiently freed from its attachments, and the diseased part guarded by a blunt-pointed needle. This part of the operation, on account of the space gained by the removal of half the organ, can be performed with comparative ease and rapidity." The operation, as a whole, is an excellent one, and one which will recommend itself to surgeons as being applicable to many cases of cancer of the tongue.—From the *British Medical Journal* of 20th Oct. 1883.

Part Fifth.

MEDICAL NEWS.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination at the sittings held in December and to 4th January, and were admitted L.R.C.P. Ed.:—Thomas Buxton, Stafford; George Knapton, Southampton; Alfred Tom Rimell, London; Andrew Hunter, Co. Monaghan; Harry Potter, Nottingham; Godfrey Carter, Ilkley, Yorkshire; James Joseph Prendergast, Melbourne, Australia; Frederick Martin Godde-Smith, Droxford, Hampshire; Ernest Denman Minter, South Devon; George Thomas Myles, Bristol.

Hull General Infirmary.—This building is to be entirely remodelled, and to have two new wings added to it, in accordance with the plans prepared by Messrs H. Saxon Snell & Son, architects, of London. The plan of the present structure, erected in the year 1784, is such that the administrative offices and sick wards are all contained under one roof, with the result that a large proportion of the officers are continually reported as suffering from hospitalism. It is, in consequence, proposed to cut two gaps through the principal front, and place the officers' rooms and kitchen offices in the centre block so formed, and the sick wards in the detached portions at either end; and when to these are added the proposed new wings, the building will accommodate 262 patients. An out-patients' department is also to be erected as a detached building upon a site adjoining the Infirmary grounds, but with a public entrance from Brook Street.

An able and instructive article on the "Physiology of Sleep," in the *New York Medical Journal*, reminds us of the views that have been so long urged on that subject by our townsman, Dr Cappie. The writer of the article shows an intimate acquaintance with the writings of Durham, Mosso, Vulpian, H. Spencer, and Preyer, but strangely omits all reference to those of Dr Cappie. We trust that if they are still unknown to him he will soon be made familiar with them in the second edition of the excellent little work on the *Causation of Sleep*, which we are glad to observe is being favourably received by the medical press, while the author's views are beginning to be accepted by physiologists.

DR STERNBERG, Surgeon, U. S. Army, in a paper upon bacteria in healthy individuals, read before the American Association for the Advancement of Science, Cincinnati, 1881, says, "The question is frequently asked, 'If bacteria are such terrible things, how is it possible that we can exist upon the earth, surrounded and infested as we are by them?' Certainly there would be an end to all animal life, or rather there never would have been a beginning, if living animals had no greater resisting power than dead animal matter to the attacks of these parasites, which by numbers and rapid development make up for their minute size. On the other hand, but for the power of these little giants to pull to pieces dead animal matter, we should have dead bodies piled up on all sides of us in as perfect a state of preservation as canned lobster or pickled tongue, and there being no return to the soil of the materials composing these bodies, finally all vegetation would disappear, and the surface of the earth would be a barren and desolate wilderness, covered only with the inanimate forms of successive generations of plants and animals."—*From a paper by Dr Marcey of Boston, on "The best Method of Treating Operative Wounds."*

RAILWAY SPINE.—In this iconoclastic age, when we are not allowed to believe in a personal Devil or good honest ghosts, or even to coddle our own pet superstitions and hobbies without a suspicion of mental degeneration, it is natural that the medical "bugaboo" raised by Mr Erichsen some years ago, and christened spinal concussion, should meet with little quarter at the hands of the modern scientific observer. It is possible, however, that in this, as in other things, the sceptic may have gone too far, and that although it was no ghost that has alarmed us there may actually have been some phosphorescent light which we do not understand, and the nature of which we cannot fully explain. The cases reported recently in the *Journal* by Dr J. J. Putnam, and the paper in a late issue by Dr Walton, point to the reality of a set of symptoms induced by traumatism which corresponds well with those hitherto termed spinal concussion,—a name so misleading that many accurate observers, through the influence of the name alone, have been induced to deny the existence of what the name covers. A rose, however, under any other name will remain as fragrant to the sufferer, and whether the ailment be termed railway spine, or traumatic neurasthenia, or hysterical hemianæsthesia, the condition is equally distressing. Mr Erichsen's book undoubtedly led to an exaggeration of the dangers of a certain class of railway accidents, and gave a pretext for a great many unwarranted assaults on railway corporations. While, representing the reaction, Mr Page's recent work certainly favours an undue belief in the certainty of recovery in cases of this sort. Erb presents the matter rather more fairly than either of these writers. Accidents which occur in railway collisions, as other accidents, may lead to a long train of nervous symptoms, and when death has resulted, a post-mortem examination may reveal little apparent cause for the fatal result. In a few cases the evidence of a chronic meningitis of the cord was found. In the greater number of these cases the pathology is a riddle, which for its satisfactory solution will need a great deal of experiment and careful and extensive post-mortem investigation. Before accepting the actual identity between what is called hysteria and certain forms of spinal concussion, or, as suggested by Dr Walton, regarding the railway spine as really a railway head, it is necessary to have a clearer idea as to what hysteria actually is, and in general what part the brain plays as a central origin for some of the less marked nervous phenomena hitherto supposed to radiate from the cord. The chief practical difficulty, however, encountered in these cases, is not in determining whether the hyperæsthesia or the localized anæsthesia results from changes in the cord or in the brain, or whether the symptoms are to be regarded as organic or functional, but whether they are actual or feigned. But little is written in the ordinary medical text-books on malingering in these cases, for two reasons: first, because the physician's bias is to regard a patient's manifestation of pain as genuine, or at least as "nervous" or exaggerated; and, second, because the directions for the detection of malingering in these cases frequently would rather belong to a detective's manual than to a medical essay, involving as they would the questions of motive, previous personal character, and veracity. Usually the patient's symptoms are of such a nature, and so consistent or inconsistent with the ordinary types of disease, that the observer can arrive at the truth as to shamming by the process of reasonable conjecture; but given an intelligent and unscrupulous man with the prospect of a large award to be earned by his skill as a malingerer, and the opportunity for instruction afforded by the number of physicians usually called to examine such cases by the friends, the lawyers, and the family doctors, the result is frequently a puzzle which has not only to be guessed at and treated on the doctrine of chances, but explained before a non-medical audience unaccustomed to the shades of medical diagnosis, and inclined to regard doctors as a class of illogical men who disagree. The needed clinical work, it seems to us, in the study of "railway spine," is the determination of clearly defined types of the disease, and the investigations of the variants from this type, and the certain relation of objective symptoms to the disease. The localizations of the central lesions and the pathological changes represented by certain symptoms furnishes interesting problems, but before we attempt to discover the North Pole let us develop Central Africa. All attempts, however, to get at a rational explanation of the peculiar features of this riddle of a disease must be regarded as of value, and the recent attention paid by neurologists to the subject is heartily welcome.—*Boston Medical and Surgical Journal*, 25th October 1883.

MR A. G. MILLER, at the conclusion of a clinical lecture delivered at the Royal Infirmary on the 5th January 1884, said:—

GENTLEMEN,—You all know, doubtless, that the present aspect of Listerian antiseptics has lately formed a subject of discussion in the medical journals and elsewhere. As very different reports are circulated as to Sir Joseph Lister's opinions and practice, I wished to satisfy myself as to the real state of matters, and accordingly went up to London and went round the wards at King's College Hospital (in Sir Joseph Lister's absence) with Mr Watson Cheyne and with the house surgeon. The result of my observations I wish now to give you on this the first opportunity after the holidays.

In the first place, I have to state that Listerian treatment of wounds is by far the best method we have. This is not a statement made from studying statistics and reports (which are proverbially unreliable), but the result of my own observation. Now I will describe to you the practice which I saw in Sir Joseph Lister's wards.

The only operation which I saw performed was excision of the mamma by Mr Watson Cheyne, who is well known as the exponent of Listerian views, and therefore a most reliable authority.

1*st*, The hands of the operator and assistants were purified in carbolic lotion, the instruments were immersed in the same, while the part to be operated on, and all round about it, were thoroughly washed and made aseptic with 1 to 20 carbolic lotion. The axilla was shaved and specially scrubbed. Of course the sponges were wrung out of carbolic lotion.

2*nd*, To promote an aseptic atmosphere the spray was used. Lister has not given up the spray, but uses it regularly, unless for very trifling cases.

3*rd*, Contamination of the wound by septic material during the operation was prevented by the spreading all round the part to be operated on of towels dipped in 1 to 40 carbolic lotion, and by the presence of a basin into which the operator from time to time dipped his fingers, instruments, etc.

When the operation was completed, thorough drainage was provided by means of indiarubber drainage-tubes placed in all directions. The edges of the wound were brought together by means of deep sutures of silver wire with buttons, and superficial sutures, closely placed together, of carbolized silk, except, of course, where the ends of the drainage-tubes protruded. Green protective was placed over the wound and buttons; over this was placed a layer of gauze dipped in carbolic lotion, and then several layers of loose gauze placed mainly where discharge was likely to come. Over all were placed twelve or sixteen layers of gauze, with a piece of mackintosh cloth under the outermost layer. In the present instance there were two such outer dressings—one for the front and the other (the larger) for the back, overlapping the front one thoroughly. These dressings were retained in position by a flannel gauze (uncarbolized) bandage and several turns of elastic webbing.

Now, you may wonder why I have thus minutely described to you what you are already familiar with, because you see it almost daily practised in this and the other theatres of this hospital. But that is exactly why I have told you the manner of dressing so minutely, just in order that you may see that Lister has not changed the method with which we are familiar, notwithstanding the reports that we have heard to the contrary.

One thing slightly fresh, but, in my opinion, not of slight importance, I noticed. This was in regard to the manner in which the dressing of cases was conducted in the wards. When the old dressings were taken off under the protection of the spray, the wound was first cleaned, then examined, and immediately covered with the protective and deep dressing. After this, with the wound thus protected, the surrounding parts were washed carefully, and then the outer dressing put on. Now, the advantage of this is twofold. Mr John Duncan has demonstrated that the longer a wound is exposed—even under the spray—the greater is the risk of its becoming septic. Secondly, this plan of covering the wound first prevents its possible contamination from the washings of the surrounding parts, which are more likely to be dirty, or even septic, being nearer the edge of the dressings. Sir Joseph Lister, I know, lays considerable stress on the importance of this point in dressing cases.

Now to return to Lister's results. I repeat that they are the best I have seen. They are the nearest to perfection. That they are not absolutely perfect I think I can show. I saw one patient who had had a temp. of 103°. His wound had suppurated, and when I saw him there was still suppuration (not very healthy-looking), and his temperature had not fallen to normal some weeks after the operation (for fracture of the patella). But what was the condition of this worst case? Not a whit worse than the ordinary run of cases met with in the wards of those surgeons who do not practise antiseptic surgery. I don't think I could say anything that could better prove to you the superiority of Listerian surgery.

Now, I wish to give you a word of caution, which I consider necessary after Sir Joseph Lister's recent advocacy of free and fearless opening into joints—of course, with all due antiseptic precautions. He knows how to avoid and combat all risks, for he has studied and practised antiseptics for twenty years. Yet he may fail. If this be so, what of others who have not had his experience and practice? It is but a truism to say that nothing human is infallible. But it is true. No one is infallible, not the Pope, nor even Lister.

The unfortunate result of such teaching is already known. Surgeons unskilled in antiseptics have attempted to follow out Lister's practice, and the loss of limbs and lives has been the result.

There is another source of fallacy in regard to operations on joints of which you should be made aware. Joints that have been long unused, as in the case of an ununited fracture of the patella, where the patient has been laid up in bed for weeks, and for long afterwards cannot use his knee properly, may be cut into with comparative impunity; the synovial membrane will not readily resent interference, neither will absorption from the surface of the membrane be so active. But it is quite another thing with regard to joints which have sustained recent injury. They are just in the condition most readily to resent interference and to absorb any results of inflammation or putrefaction into the system. You will see, therefore, that what can be done with comparative impunity to old diseased or unused joints cannot be with the same safety attempted in recent injuries. In other words, success in suturing cases of ununited fracture of the patella should not make us rash in interfering with cases of recent fracture.

In Ward XVI. is a man who fractured his patella about four weeks ago. Synovitis succeeded from the injury, which caused considerable separation of the fragments. When the effusion disappeared the fragments came together easily. On attempting to approximate the two portions of the patella, I distinctly felt that there was some soft substance between the surfaces, preventing absolute contact and the sensation of crepitus, as has been described by Dr MacEwen of Glasgow. Instead of at once making an incision, as recommended by Dr MacEwen and Sir Joseph Lister, I bethought me of a method of treating ununited fracture, namely, to rub the fractured surfaces firmly together. This I did—though my patient did not seem to enjoy the process—till I could feel that the soft interposed material had disappeared and the fractured surfaces were grating in absolute contact Retaining the fragments in close approximation, I applied Malgaigne's hooks and laid the limb on a wire splint. It is now about a fortnight since this was done. The fragments are still in close approximation; and should the result be osseous union, or even close fibrous union, I consider that this method of treatment for recent transverse fractures of the patella is as good as that of M'Ewen or Lister, and infinitely safer.

Part First.

ORIGINAL COMMUNICATIONS.

I.—SCARLET FEVER: HOW TO LIMIT ITS CONTAGIOUSNESS.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

IT is only in comparatively recent times that attempts have been made on a proper scientific basis to limit the spread of the zymotic diseases. After the discovery of the modifying effect which inoculation possessed on the course of smallpox, it was thought that other of the eruptive diseases might also be favourably influenced by their being communicated in this way; but though it was found that measles could in some instances be inoculated, the disease so induced ran an ordinary course. Scarlet fever has been accidentally conveyed in much the same mode to parturient females, usually with disastrous results. I can find no notice of any experimental inoculation in the case of healthy children. While few persons escape an attack of measles, very many never have scarlet fever; and thus it would be inadvisable for many reasons to propagate the disease artificially. Internal prophylactic measures have been failures so far. Neither belladonna nor sulpho-carbolate of sodium have been proved to possess any protective power against scarlet fever. In the case of measles, no prophylactic medicine has ever been suggested.

Scarlet fever stands alone in many particulars. It is now the most fatal of all the eruptive diseases. It is scarcely, if at all, infectious during its earliest periods, when it can be most easily and certainly recognised; and though we do not know at what period of its course it first assumes its infectious character, we do know that, left to itself, it becomes day by day, and for a considerable if not indefinite time, increasingly communicable. It is no wonder that the name of scarlet fever carries terror with it. The attempt to lessen this dread by calling mild cases scarlatina is much to be reprobated. It cannot be too widely known by the public at large that scarlatina is but scarlet fever under another name, and that the mildest form of the disease in one individual may impart it in its direst malignity to another. The restriction is used advisedly, for there are unquestionably some epidemics of scarlet fever far more severe than others. The type of the disease is not always the same.

Scarlet fever is a disease of children and young adults. In general, with advancing life the liability to it steadily decreases; and when middle age has been reached, the chances of taking it are small. The later in life that we are exposed to its contagion, the less risk we run. Hence the young should be shielded from exposure, and the elderly should act as nurses to those struck down by it; or, if not the elderly unprotected by a previous attack, those, though young, who have already had the disease. A second attack of scarlet fever, though not absolutely unknown, is excessively rare.

The removal of those members of a family who have not yet had scarlet fever to a distance from the individuals affected, where they may be free from accidental communication, or may be transplanted entirely for a time from an infected district, would seem the most certain mode of protection. And yet there are often many drawbacks. Such a procedure is always more or less expensive. It may necessitate that children requiring special care should be placed in the hands of comparative strangers, and in the event of their falling ill the anxiety of the parents is doubled. The removal of the affected person from his residence to an hospital or other place where he can be treated till well is another mode. In some instances this is absolutely necessary and must be resorted to at all hazards. But there are many cases where to do this would be little else than cruelty, and there are very many others where, I believe, it is wholly unnecessary. What means, then, are available which will reduce to a minimum the chances of the spread of the disease, without distant separation, or even without separation at all?

It is needful to estimate these measures at their true value to understand the modes in which scarlet fever is conveyed from one to another. We do not yet know what the contagion of scarlet fever is. Micrococci have been found by some; their presence has been denied by others. But the infective particles which have the power of reproducing it exist in the scales which separate from the skin of the convalescent, and float in the breath exhaled from his lungs. It has not been determined whether the urine at any stage, or the alvine evacuations, can communicate this disease; but the disinfection of these is a comparatively easy matter, and in the absence of any direct evidence that by their means the disease may be spread, they have been left out of consideration. That the disease may be spread by the desquamating cuticle we have abundant and undoubted evidence. That it may also be communicated by direct inhalation of the breath, as in the analogous case of diphtheria, there can be no doubt. These two are therefore the main, if not the only channels through which the disease is conveyed from the affected to the healthy.

When once these minute infective particles have become diffused in the air which surrounds the sick person we have no further control over them. We have no available means of disinfecting the atmosphere while the patient is in the same apartment. Those substances which might possess the power of neutralizing the contagion in the air are incompatible with life, and, if employed in a strength sufficient to exercise control over the infective material, would prove fatal to every living being within their range. Thus all agents employed to disinfect the air of rooms which are at the time occupied are, to say the least of it, harmful. If they are possessed of odour, they mask the closeness of the air and the consequent necessity for ventilation. If they have no smell, they are objectionable as tending to foster feelings of false security.

When an individual contracts scarlet fever, when he catches its infection, the first symptoms are manifested in the throat; the second, within a few hours after, in the eruption on the skin. Now, though we cannot disinfect the air which surrounds him, we can, by the employment of suitable antiseptics, disinfect his throat, and thus prevent the infectious particles from being taken up by the breath which he expires from his lungs. We can in the same way disinfect his skin, and thus render the scales thrown off in the process of peeling, which takes place during his recovery, innocuous. We can thus prevent the air of the chamber in which he lies from ever becoming charged with the floating poison, which is much better than were we to endeavour to destroy this poison after it has become diffused in the atmosphere. The latter method is certainly a very roundabout one. In general, the clothes, the bedding, all he had touched, all round about him during his illness, have been carefully fumigated, and otherwise cleaned, purified, and destroyed, *after he became well;* but too often the patient himself, the source of all the danger, has been forgotten, as far as employing precautionary measures for the protection of his attendants and others from the commencement of his illness and through the whole course of his complaint.

What, then, can be done in this respect? The development of the eruption should be promoted by warm baths, and the congested skin should be soothed and kept soft and pliant by their means throughout. Warm baths should be used *from the very first.* There is quite a consensus of opinion that it is a symptom of good omen when the rash appears freely, and its evolution is facilitated by a hot mustard bath. Afterwards a simple warm bath, at a temperature of from 95° to 98°, should be employed nightly. The patient may recline in a hip bath and have the water laved over him, or be laid out at length in a long narrow bath, with the head supported. This latter plan obviates the chance of faintness or giddiness, sensations which are sometimes complained of. When the skin has been rapidly dried, the sick person should be at once replaced in bed, and the whole body and limbs, and the head, which has not been wetted, are to be anointed with a medicated ointment, which should be gently smeared over the surface. This prolongs the cooling effect of the bath; and while, by its oiliness, it lessens the production of the dry scales, it renders at the same time those which are cast off harmless. The use of an antiseptic ointment during the stage of desquamation is nothing new; but its employment from the very first, in conjunction with warm baths, so as to anticipate the development of the infectiousness of the scales, has not, I believe, been previously advocated. That which I have found best suited for the purpose is one composed of thirty grains of carbolic acid, ten grains of thymol, one drachm of vaseline, and as much simple ointment as will make the whole up to an ounce. The thymol should be dissolved by the aid of heat, as its crystals are apt otherwise to irritate the skin. So prepared, the odour is not unpleasant, while it retains its greasiness for a considerable time after being applied. It should be smeared on in the morning as well as at night, after the bath. When the patient is well enough, one or two thorough washings with carbolic acid soap, in which process the hair and head should be included, will remove any lurking trace of infection.

For the throat we now possess a remedy thoroughly efficient and at the same time safe. The whole of the back and sides of the throat and tonsils should be brushed three or four times a day with a saturated solution of Barff's boroglyceride in glycerine. This is at least three times as strong as a saturated solution of boracic acid in glycerine. When painted on the inflamed throat it causes no pain, and the taste is not complained of even by young children. The inside of the nostrils may be similarly treated if there is any nasal catarrh.

All bed and body linen, handkerchiefs, and everything which can be washed, which the patient has used, should be put into a tub containing one large tablespoonful of carbolic acid dissolved in the water with which it is filled, so soon as they are removed from his person. In this way they can be carried from the room without any risk of their spreading the disease to others, and washed by any one without danger.

A question is often asked, When is the person who has had scarlet fever free from the risk of infecting others? and another, What measures should be adopted with regard to the apartment in which he has spent the period of his illness? As to the first, it is the current opinion that desquamation should be completed before he is permitted to mingle with those who have not had the disease; and when no precautionary measures have been adopted while he was ill, this is a safe rule. But it must be remembered, as bearing on this point, that the process of scaling neither commences nor is terminated in all cases at the same period. There are various causes, besides the severity of the disease in the individual instance, which affect this. Peeling usually shows itself, in cases of moderate severity, during the third week, and may be ended by the sixth. But the commencement is frequently later, and the completion correspondingly protracted. When the treatment indicated has been faithfully carried out, the desquamating flakes of cuticle have no infectious properties, and therefore the state of the patient's health and the stage of his convalescence are the best guides as to when he should be permitted to mix with others. I believe it is quite unnecessary, under such circumstances, to wait for the end of desquamation. Indeed, the rule is so often disregarded that it is little of a safeguard, and patients sometimes peel several times.

As to the room, much the same reasoning applies. It should be very thoroughly cleaned, the floor and woodwork washed, and the papered walls swept down. I speak exclusively of cases which have been treated in accordance with the principles laid down. Fumigation by means of sulphur pastilles is known to destroy the fungi in wine-casks which have been thoroughly washed previously, and to preserve them sweet, provided means be taken to prevent the admission of air before the cask is again filled with wine. Whether such fumigation, alone and apart from other measures, has the same destructive effect on the contagion of scarlet fever may be inferred, but has not, so far as I am aware, been proved. It must be borne in mind that, before fumigation, the patient, the source from which all this infection emanated, has been removed elsewhere.

Now, it may fairly be asked, What proof can be afforded that by the simple means described the spread of scarlet fever can be effectually checked? The following case may be regarded as one in which the plan was subjected to an almost crucial test:—A child in a family where there were four others younger than herself who had not had scarlet fever, contracted the disease from a neighbour's child in a street where it was prevalent. She was seen as soon as the rash had come fairly out. The house consisted of two rooms, but isolation, in the sense of completely separating the family, was impossible, from various circumstances in the house, and the parents objected to the removal of the child to an hospital. The plan of treatment which I have sketched was carefully carried out by an anxious and intelligent mother; and though all the family used the room more or less by day and night during the entire course of the child's illness, none of the four unprotected children took the disease. The mother at this time had an infant which she brought up on the bottle, and in making this ready she handled the milk freely, and she was the sole attendant on the other children. This occurred a year ago. In another instance, a boy aged 13 was laid up with a severe attack of scarlatina anginosa. He was delirious for days. The house also consisted of but two rooms, and there were three other brothers older, besides the father and mother, as occupants. These assisted the mother to bathe the boy, and otherwise to carry out the treatment. None of these took the disease. So much for negative evidence; but the fact remains that in no case—and they are many—in which this treatment has been followed has there been a fresh case after its commencement. The contagium of scarlet fever is not very, if at all, volatile, though it can be carried by air in motion. In this respect it differs from that of measles, which is highly volatile. We can therefore fix the contagion of scarlet fever, while we cannot that of measles; and I wish to lay before the profession a plan which, I have no doubt, will soon be extensively tested, and, I have as little doubt, with a satisfactory result.

II.—A RARE FORM OF LARYNGEAL NEUROSIS.

By P. M'Bride, M.D., F.R.C.P.E., F.R.S.E., Surgeon to the Ear and Throat Department of the Edinburgh Royal Infirmary; Surgeon to the Edinburgh Ear and Throat Dispensary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

(*Read before the Medico-Chirurgical Society of Edinburgh*, 16*th January* 1884.)

The affection to which I am about to direct your attention was first described in 1876 by Charcot as laryngeal vertigo. This author had, up to the year 1879, observed four cases; and, so far as I am aware, other writers have contributed to medical literature five more examples of the same neurosis, making in all nine published cases. To these I propose to add a tenth; but before doing so shall endeavour to give a short *résumé* of the clinical histories so far recorded.

Charcot's[1] cases were as follows:—

(1.) A patient (male) who complained of gout and cough, but was certainly not epileptic, was from time to time, after a slight cough, affected by vertigo without loss of consciousness. During these attacks he fell down without a trace of convulsive movement, but very soon recovered and got up. These seizures were first noticed when the cough began.

(2.) Another patient, aged 55 (also a male), not an epileptic, was subject for more than a year to what he called "attacks." These were preceded by tickling in the region below the larynx, and a short, dry cough, which was followed by a sort of fit, during which the patient fell without loss of consciousness,[2] while the face became turgid, and some convulsive movements occurred in the head and arm. The tongue was never bitten, and the attack, which was always short, was scarcely over before the patient got up without hebetude or confusion of intellect. These

[1] *Revue des Sciences Médicales*, x. 135; *Le Progrès Médical*, 1879, xvii.

[2] It is right to state here that the account of this case given in the *Revue de Médecine* differs in an important point from that contained in the *Progrès Médical*, where it is stated that the patient lost consciousness.

attacks were frequent (fifteen or sixteen a day); and when the fits of coughing were not followed by such severe paroxysms as above described, the patient only experienced an indescribable feeling of giddiness, without falling. He suffered from granular pharyngitis, bronchitis, and emphysema. The application of nitrate of silver to the mucous membrane of the pharynx, the external use of vesicants over the larynx, and the internal administration of bromide of potassium, effected a cure, in these cases, within a few weeks.

(3.) A medical man, about 40 years of age, after an attack of acute rheumatism, began to suffer from asthma and bronchitis. The paroxysms of the former were often followed by the expectoration of bronchial casts. During the year 1877 he became subject to attacks quite distinct from asthmatic paroxysms. These were preceded by burning and tickling referred to the region below the larynx, followed by a fit of coughing. The patient then experienced giddiness, and almost at the same time the fingers of his left hand became flexed, the left arm became stiff in the position of extension, and was raised almost as high as the head, while the whole limb gave three or four convulsive twitches. The patient then lost consciousness, and when he recovered found himself lying on his left side. At times the premonitory cough was only followed by noisy inspiration and a feeling of suffocation, without further symptoms. Laryngoscopic examination by M. Fauvel revealed only slight hyperæmia of the larynx. Eventually the patient died during a paroxysm of asthma, being up to the last in full possession of consciousness.

(4.) A man, 45 years of age, suffered in July 1878 from bronchitis, which was soon recovered from, but left in the region of the larynx a more or less permanent feeling of tickling and warmth, which were liable to exacerbations producing fits of cough. In August, after one of these paroxysms, he lost consciousness, falling to the ground; and since then such attacks have been frequent, three or four sometimes occurring in the course of a day. During the fits the face became swollen and slightly livid, while convulsive twitching occurred in the face and limbs, but there was no cry, neither was the tongue ever bitten. Immediately after the attack was over the patient got up without a trace of mental confusion. Examination of the larynx gave negative results, while the internal administration of bromide of potassium, with the application of vesicants over the region of the larynx, effected a speedy cure.

Charcot believes that cases of this kind are entitled to be grouped as a distinct clinical variety, and has proposed for them the name of laryngeal vertigo.

In the *Practitioner*, August 1878, Dr Gasquet records the case of a gentleman, 70 years of age, who, after catching cold and suffering from severe paroxysms of cough, became liable to attacks of loss of consciousness, which were always preceded by laryngeal irritation and coughing. Treatment, directed to the larynx alone in this instance, effected a cure, but, unfortunately, neither the laryngoscopic appearances nor the remedies which were applied are recorded.

In the *Annales des Maladies de l'Oreille et du Larynx*, March 1882, Krishaber relates the following case:—

The patient, X. (male), was lame from an old-standing articular affection, but there was no neuropathic history. At the age of 21 he had pleurisy, followed by complete cure, and auscultation revealed no change in the thoracic organs.

At 25 patient had syphilis, but no tertiary phenomena showed themselves. He married at 32, and had three children, of whom two died in early infancy, while the oldest is of sound constitution. X. was in the enjoyment of good health when, fifteen months ago, he was attacked by loss of consciousness in consequence of violent emotion. That he did not fall is explained by the fact that he was seated at the time. In the course of the same day he had several attacks of dry cough, followed each time by dizziness, but without loss of consciousness. Little by little the cough was disappearing, when about six or eight days from the first attack, on making an effort, he was attacked by a slight cough, followed by loss of consciousness. This time he fell and bruised his forehead. After recovering he felt slightly stunned, but was soon again able to resume his occupation. Another phenomenon meanwhile appeared; the patient suffered, without preceding nausea, from noisy eructations, which were repeated at short intervals, and only ceased in the evening. On the next day another attack was experienced on the street, produced, according to the patient, by a sudden noise, and he again fell down unconscious, but does not remember whether this attack was preceded by cough, like the others. According to those who went to his assistance, unconsciousness lasted a short time only, but the patient became very pale. About two months then passed without any more severe attack than slight cough, followed by eructation and a peculiar, indescribable feeling of malaise, which seemed to resemble a clouding over of his mind (*obnubilation*). The fourth severe attack occurred under peculiarly characteristic circumstances. X. was in a steamer, looking at the bank of the river, when another vessel crossed near that in which he was; under the influence of this surprise the paroxysm originated. On this occasion the patient distinctly remembered that he was immediately attacked by cough and vertigo, which made him lose consciousness. After this the patient wished to get on the bridge, but on attempting to ascend he was again overtaken by cough and giddiness, which obliged him to sit down. He thought that he did not lose consciousness on the second occasion; during the remainder of the day there occurred fits of coughing, which were only followed by slight mental confusion (*étourdissement*), which the patient compares to the sensation experienced after receiving a blow on the head. He is, however, perfectly conscious of the fact that the starting-point of the attacks is the larynx, and instinctively puts his hand to his throat on each occasion of their recurrence.

"On questioning him closely," Krishaber goes on to say, "I learnt that both in slight and severe attacks, followed or not by loss of consciousness, two phenomena commanded attention: the first premonitory symptom was cough, slight and not accompanied by much sound, but frequent, like the last of a paroxysm of whooping-cough, while the second was arrest of all the muscles of respiration. It is evident from the description I have been able to obtain that the suspension of respiration is due not only to spasm of the muscles of the glottis, but to arrested action of the diaphragm and other muscles of respiration."

That if the glottis be closed the muscles of respiration will be greatly hampered in their action is evident; but from a mere history given by a patient it seems to me quite impossible to arrive at the conclusion that their action is arrested. In Krishaber's case, laryngoscopic examination revealed only slight hyperæmia, but, unlike other recorded cases, antispasmodic treatment failed to afford relief.

The next case is that described by Gray (*The American Journal of Neurology and Psychiatry*, Nov. 1882). This author writes:—"In February 1880 there came to consult me a man aged 55, who stated that about a month before he had begun to have a cough, and that when it was severe he would lose consciousness for a short time. There was no history of any convulsive movements whatever. These coughing spells were always preceded by a burning and tickling sensation at about the level of the larynx. A thorough laryngoscopic examination was made by my friend Dr Thomas French, and nothing abnormal was discovered. In 1863 he had been wounded on the head by a bullet, which ploughed up the tissues over the skull from brow to vertex, somewhat to the right of the median line. He was shortly afterwards affected by losses of consciousness similar to the present ones, and they continued for about two months. During the interval he has had colds innumerable, but never any vertigo or unconsciousness. Under treatment with the bromides he had no return of the losses of consciousness, but he was only under my charge about three weeks, and since then I have not seen him."

In the *Archives of Laryngology* (July 1883), Lefferts describes two cases of so-called laryngeal vertigo. To use his own words:—"A gentleman, young, strong, and free—as I have assured myself by careful physical examination—from any abnormality of either heart, lungs, or kidney, is sitting at his dinner-table surrounded by friends. Suddenly he has a slight attack of spasmodic cough, and a second later falls to the floor unconscious. Almost immediately he arises, resumes his seat and the conversation at the point where it was interrupted. This is not the first attack of this character that my patient has had. Several have occurred during the past eight years; and with much greater frequency—so frequent, indeed, that he has retained no recollection of the number—attacks of partial unconsciousness, always preceded by the same paroxysmal attack of coughing, have occurred. They last but a few seconds, are preceded by blurring of vision, with dizziness or vertigo, and pass away instantly, leaving him clear-headed and bright. I have said that he is a young and strong man, free from organic lesion. He has an incomplete history of hereditary neurosis. There is no evidence of any convulsive movements during his attack. These latter are always ushered in by tickling in the larynx and violent cough; the face becomes suffused. In the worst he falls without cry, but rises immediately, without confusion of ideas, and without remembrance of what has occurred during his brief unconscious interval. In the lighter attacks the premonitory cough is often followed by a few stridulous inspirations and a slight feeling of suffocation, then vertigo and momentary unconsciousness, or it may be slight cough alone, with some spasm of the larynx, slight dizziness, but no unconsciousness. An examination of his larynx shows that, aside from a slight hyperæmia, the appearances are normal; the pharynx is granular, uvula is not elongated."

Of his second case Lefferts gives only a brief history. "It likewise," he goes on to say, "concerns a young strong man, and his history would be but a repetition of the first that I have detailed to you, with the exception that his attacks are not so severe; he has had but two unconscious falls, and he does not live in dread of sudden accident in the street or elsewhere. He has no history of other neurosis. A sister is decidedly neurotic. The history of his affection dates back one year only."

I have thus far endeavoured to bring before you what is known of laryngeal vertigo, as it has been called by Charcot, who is inclined to believe that in this affection we have the analogue of Menière's disease—the afferent nerve being the superior laryngeal. Gray believes that a more accurate designation is to be found in the term laryngeal epilepsy, but bases his arguments on the erroneous assumption that in all previously recorded cases consciousness was completely lost. There can be very little doubt that the term spasm of the glottis of adults, used by Krishaber, is more in accordance with clinical facts. This author draws an analogy between the neurosis in question and so-called nervous or hysterical cough. The latter is, however, most commonly observed in young girls, and more rarely in boys, while the former has so far only been described as occurring in grown men. Moreover, the term employed by Krishaber would also apply to the stridulous respirations sometimes observed in hysterical females; and for these reasons I think the name complete glottic spasm of adults would be more suitable.

I shall now give briefly the history of a case which has lately come under my care and presents some points of special interest.

D. M., age 35, married, consulted me on the 22nd of October 1883, giving the following history:—Eight months ago he swallowed a fish-bone, which stuck in his throat, and, as the patient thinks, remained there half an hour. Two days afterwards, on going to bed, he experienced difficulty in breathing, and this symptom became so marked that he got up and paced the floor during the whole night. Castor oil was administered, and the throat poulticed, while the patient remained in bed for a week, during the whole of which time—to use his own words—he "felt inclined to be choked." After this he thought himself able to work, but was obliged to desist owing to attacks of giddiness. While sitting at work (boot-closing) his breathing seemed suddenly to stop, and his head began to swim. This sensation was described by the patient as giddiness, but further questioning soon elicited the fact that in no sense was it a true vertigo. In the latter surrounding objects, or sometimes the sufferer, seem to revolve or rotate; but no such subjective phenomena were experienced by the patient whose case we are considering. During the attacks it was noticed by those in the room that his face became pale, and remained so for some time afterwards. Consciousness was never lost, neither was there any convulsive movement. The fits were preceded by a short cough, and the throat felt as if being "squeezed together;" but there was never any feeling of burning or tickling in the region of the larynx, while—again to use his own words—"all the breathing machinery seemed to stop." The patient was never aware of any special exciting cause, and stated that the fits came on when he felt quite "at ease." On one occasion, while standing, he suddenly became pale, and fell back into a chair, so that his wife ran out to get assistance, thinking that death was imminent; but even during this attack the patient retained consciousness.

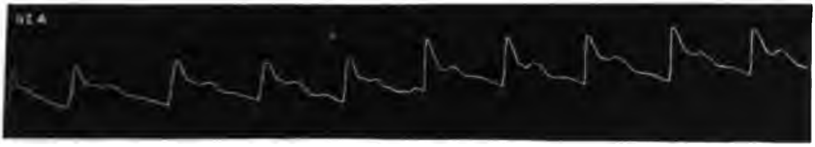
A peculiar clicking in the throat was complained of, accompanying each act of deglutition, which was referred by the patient to the region of the uvula, and was most probably due to spasmodic action of the palate muscles, more especially those which act on the Eustachian tubes. Examination of the throat showed congestion of the pharynx, the posterior wall of which was granular, and the uvula was drawn to the right. The larynx was congested, and in phonation the slightly thickened vocal cords did not meet as accurately as in health. The whole larynx, including the sinus pyriformis on both sides, was examined, and it can therefore be positively asserted that the symptoms were not due to the presence of a foreign body. Sometimes the patient had difficulty in swallowing solids. This was, however, only occasional, and often followed over-indulgence in stimulants; for although not a habitual drunkard, he sometimes drank to excess.

On examination of the chest, both lungs and heart were found normal. To verify this fact I sent the patient to Dr James, who concurred with me as to the absence of thoracic disease. Tendon reflex is somewhat exaggerated, and Dr James found slight ankle clonus. The sight is good, and there is no colour-blindness nor unsteadiness when the eyes are closed. There is no history pointing to hereditary neurosis; neither has he ever had syphilis. The giddy attacks recurred about once a fortnight until treatment was begun. The latter consisted in the application of strong astringents to the pharynx, counter-irritation over the larynx, avoidance of alcohol, and the internal administration of the bromides of potassium and ammonium, and the patient has now been for a considerable time without an attack. The diagnosis in this case was simple, for the symptoms could only be due to either locomotor ataxia—which was easily excluded—or to the neurosis under consideration.

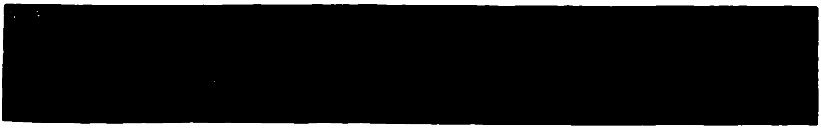
I think the description given by this patient of his attacks fully confirms the view of Krishaber, that the paroxysms are due to spasm of the glottis. Indeed, that this is the case has not, so far as I know, been disputed. Charcot, indeed, seems to believe—as before said—that the attacks are of the nature of giddiness, the irritation being conveyed by the superior laryngeal nerve. The latter is, I need hardly say, the sensory nerve of the larynx, and it is well known that its stimulation produces spasm of the glottis. My patient presented a well-marked tendency to spasm, not only in the region of the larynx, but throughout his whole muscular system. Thus he had exaggerated tendon reflex, ankle clonus, spasmodic action of the palate muscles, and occasionally suffered from spasmodic stricture of the gullet.

Let us now turn to a consideration of the actual chain of events which leads to the paroxysms. In every case so far reported the fit was preceded by a short cough, or, in other words, by a series of spasmodic inspirations, followed by spasmodic expiration, with partially closed glottis. Now, there can be little doubt that the complete spasm of the glottis will replace the act of coughing, and that it therefore occurs just after a full inspiration. To the physical conditions thus produced within the thoracic cavity I believe the attacks to be due.

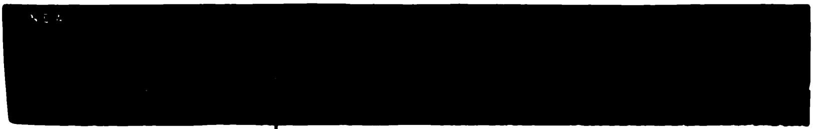
The question next arises as to how these physical conditions can produce dizziness or loss of consciousness. If a healthy person takes a deep inspiration, and then attempts to perform the act of expiration with the glottis closed, it is evident that the thoracic organs are artificially and voluntarily placed under the same conditions which pertain at the beginning of an attack of so-called laryngeal vertigo. The effect upon the circulation produced by this experiment is very striking, as may be observed by placing the finger on the pulse, which becomes immediately slower and feebler than before. The effect upon the pulse is, however, still better shown by sphygmographic tracings, which, with the kind assistance of Dr Mackay and Mr Aldridge, I have been able to obtain. It will be seen that the result of the experiment is almost complete obliteration of the pulse-tracing; and it is a very interesting fact that the gentleman experimented upon actually experienced a momentary threatening of syncope just after one of the tracings was taken.



Normal Tracing.



Deep inspir. began at 2nd up stroke.
Forced expir. with closed glottis at 5th up stroke.



Deep inspir. followed by forced expir. with closed glottis.

I have very little doubt that, in the paroxysms which characterize the disease under consideration, a closure of the glottis occurs immediately after full inspiration; this is immediately followed by an attempted expiration, and as a result the patient either faints or gets dizzy. Immediately syncope is produced, or, in some cases, just before this stage is reached the spasm relaxes and the attack is over.

To explain exactly how this tendency to syncope is brought about by the physical conditions above considered is a somewhat difficult problem. The increased atmospheric pressure on the walls of the alveoli will in all probability prevent, or tend to prevent, the free passage of blood through the lungs, and therefore lessens the quantity of blood in the left side of the heart. Again, the pressure on the large intra-thoracic veins must hinder the return of venous blood, and thus we can understand that the face will be pale or turgid according as the spasm of the glottis lasts for a longer or shorter time. It is also quite conceivable that the compression of the heart between the unyielding lungs and the chest wall may help to paralyze its action.

With regard to the nerve channel by which the laryngeal neurosis in question is produced, it is difficult to arrive at any positive conclusion. It is well known that stimulation of the sensory nerves of the pharynx, as well as of the superior laryngeal, will produce spasm of the glottis. In a considerable proportion of the reported cases there was marked pharyngeal catarrh, and in the case observed by me the disease seemed to owe its immediate origin to the presence of a foreign body for a short time in the throat. An interesting fact which I have only just learned is, that my patient has been absolutely free from his attacks ever since treatment was begun, excepting on two occasions, when they followed indulgence in alcohol. On the second of these he was also conscious of a distinct increase of redness and swelling in the throat.

The diagnosis of this affection—if the laryngeal crises of locomotor ataxia be excluded—is easy; but it may be urged that the cases recorded are merely epilepsy with a laryngeal aura. Against this view the most convincing argument seems to me to be the fact that Charcot has spoken of laryngeal vertigo as being quite distinct from epilepsy. Other evidence is to be found in the facts that a considerable proportion of the cases occurred in men of middle or advanced age, that in some consciousness was never lost, that the tongue was never bitten, that convulsive movements rarely occurred, and, finally, that in most of the recorded cases the disease has shown itself very amenable to treatment.

As to the prognosis, the fact that only one death has been recorded, and that in this case it was due to other causes, speaks for itself.

In a very interesting series of clinical lectures on vertigo, Professor Grainger Stewart[1] observes that giddiness "is sometimes produced by violent fits of coughing, sometimes by violent fits of sneezing." It is then suggested that the immediate cause of the symptom may be changes produced in the middle ear. In view of the effects which I have shown to be produced in the circulation by attempted expiration with closed glottis, it seems more probable that the attacks of giddiness referred to by Dr Stewart are more of the nature of syncope than of auditory vertigo.

While these pages were already in the press, my attention was directed to an interesting series of experiments described by Weber in *Müller's Archiv*[2] (1851). This author, after pointing out the fact that forced expiration with closed glottis causes weakening and eventually stoppage of the heart's action, gives his views as to the mechanism by which this result is produced, and details graphically the result of carrying the experiment too far, as evidenced in his own person. As Weber's explanation and personal experience go far to corroborate the conclusions which I have independently arrived at, it may be well here to translate two passages from his paper:—"The reason why compression of the chest—even if only by the muscles of expiration—has an effect so marked on the heart and circulation is as follows:—When the thoracic cavity is narrowed by the expiratory muscles, the air contained in the lungs and bronchi, as it cannot escape, is compressed, and by its elasticity exercises a uniform pressure on all the parts within the thorax, *i.e.*, not only on the pulmonary tissue, but also on the heart and large vessels. Now, as the blood contained in the veins only returns to the empty and flaccid heart by virtue of the pressure under which it is placed, it follows that if counter pressure be exercised on the heart and venæ cavæ, as is the case during compression of the intra-thoracic air, the force of the flow must be diminished. If the pressure on the heart be sufficient to balance that of the blood in the veins of the neck and abdomen, or if it exceed it, no more blood can enter the heart or the thoracic veins. The small quantity of blood contained in the thorax, in the venæ cavæ, the heart, or the pulmonary vessels is driven into the aorta by the next contraction, after which no blood can flow from the heart into the aorta. If severe pressure be exercised, the pulse, because the supply of blood to the heart through the venæ cavæ is cut off, immediately becomes small, but continues until the blood contained in the thorax has emptied itself through the left side of the heart into the aorta. Then, usually after three or five beats, the pulse intermits altogether, because no blood reaches the aorta from the empty heart, and only returns after compression of the thorax has ceased."

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[1] *Edin. Clin. and Path. Journal*, 12th Jan. 1884.

[2] "Ueber ein Verfahren den Kreislauf des Blutes und die Function des Herzens willkührlich zu unterbrechen."

On one occasion Weber, while experimenting on himself, produced actual syncope, which he thus describes:—"During this interval of unconsciousness slight convulsive twitchings of the face were noticed by the bystanders; and as consciousness returned all recollection of what had taken place was so obliterated that in spite of the fact that my pulse was being counted aloud as before, I could not at first remember where I was and what was happening."

We have in this description the exact counterpart of what occurs in severe cases of the laryngeal neurosis which forms the basis of my paper, and thus, I think, strong support is given to the views expressed in the preceding pages. These facts also show how dangerous to a patient with weak cardiac action is the act of straining, whether during defæcation or in the second stage of labour. The aural surgeon, too, will do well to abstain from recommending Valsalva's experiment (*i.e.*, forced expiration with mouth and nostrils closed) without first ascertaining the condition of the heart.

III.—CASE OF MALFORMATION IN A MALE CHILD, IN WHICH THE RECTUM ENDED IN THE MEMBRANOUS PORTION OF THE URETHRA, AND THE FÆCES WERE PASSED THROUGH THE PENIS.

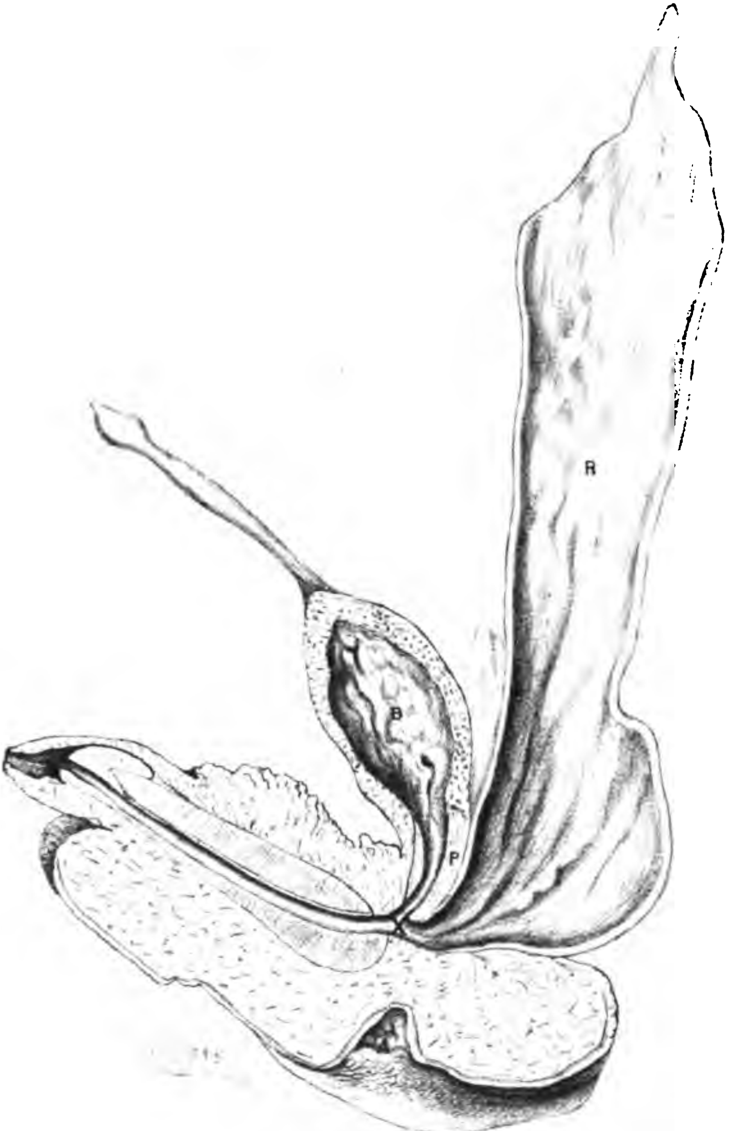
By **William Craig**, M.D., F.R.C.S. Ed., Lecturer on Materia Medica, Edinburgh School of Medicine.

(*Read before the Medico-Chirurgical Society of Edinburgh, 6th February* 1884.)

At the first meeting of the present session I showed to the Society the external genitals and pelvic organs of a male child, illustrating the rare malformation of the rectum ending in the membranous portion of the urethra, and promised to give to the Society, at a future meeting, a history of this rare and interesting case. I shall now implement that promise.

On the 18th of July last I attended one of my patients in her second confinement. The labour was natural, and the child was a strong, healthy male. Nothing abnormal was noticed at the time, either by myself or the nurse. The child was born about 7 A.M. Nothing unusual occurred that day or the next, but on the morning of the 20th, two days after the birth of the child, I was asked to see the child, as it had been crying all night and was passing its fæces through the penis. I at once went and made a careful examination of the parts. I found that the child had a careworn and anxious expression, that the abdomen was somewhat swollen and tender, and on examining the perinæum I found a well-marked raphe and a depression in the region of the anus, but no trace of an anal opening. The external genital organs were well developed.

Being fully convinced that I had a serious malformation to deal with, I at once advised that an experienced surgeon should be called in consultation. After consulting with the father of the infant, Mr Joseph Bell was asked to see the child with me, and on the same morning, about 10 A.M., we met, and, after examining the parts very carefully, Mr Bell made an exploratory incision in the region of the anal depression to the depth of fully an inch, but could discern no trace of the bowel. The wound was kept patent by means of pledgets of lint, but there was no bulging of the bowel. Two days afterwards Mr Bell again saw the patient, and this time Professor Turner was also present and examined the parts. On this occasion Mr Bell extended his incision in the region of the pelvis, but without finding any trace of the rectum. Mr Bell not feeling warranted in extending his incision deeper, the child was left in this state for a few days. During all this time the fæces came regularly by the penis, causing intense agony to the little sufferer. Mr Bell, after several days, again examined the patient, but did not feel justified in interfering further surgically



R, Rectum ; B, Bladder ; P, Prostate ; ×, Union of Rectum with Urethra.

in the case. I examined the wound daily, but could never discover any bulging of the bowel towards the opening made by Mr Bell. The child lingered on till the 5th of August, having lived rather more than eighteen days.

Shortly before the child died I had to leave town for a holiday, but left the child under the care of Dr Mackay, and told him that in the event of the child's death taking place before my return he was at once to communicate with Mr Bell, as I had obtained permission to examine the body after death. As the child died before my return to town, Mr Bell asked Dr Maxwell Ross to perform the post-mortem, which he accordingly did in company with Dr Mackay. I requested that the parts should be preserved in a solution of the hydrate of chloral until my return. The following is Dr Maxwell Ross's account of the autopsy and of the anatomical description of parts :—

"The autopsy was performed some seven or eight hours after death. Leave was given to inspect the abdomen only. Externally the penis, testicles, and scrotum were normal in appearance and development. In the middle line of the perinæum, instead of an anus, there was a depression or *cul-de-sac* of sufficient depth to admit the greater part of the distal phalanx of the little finger. The internal organs were exposed by a crucial incision and inspected *in situ*. Above the pelvis they were normal and healthy. The ascending and transverse colon contained some soft, semi-fluid feculent matter, bright yellow in colour. The descending colon and the pelvic organs, including the penis, scrotum, and testicles, were removed *en masse*, and preserved for some weeks in chloral. They were afterwards transferred to strong spirit for a few days to harden. With the assistance of Mr Symington, a section was made in the middle line of the penis, bladder, and lower part of the rectum. The bladder wall was slightly hypertrophied. There was no communication between the rectum and the bladder, but in front of the prostate gland the rectum entered the membranous portion of the urethra, as shown in the accompanying drawing.

"As can readily be seen by a reference to this drawing, the first and second parts of the rectum were well developed, the latter being somewhat dilated behind the place where it opened into the membranous part of the urethra. The third portion of the rectum was completely undeveloped."

Such is the anatomical description of the parts by Dr Maxwell Ross, and an interesting question arises, Can this rare malformation be accounted for by a reference to the development of the parts? In cases of simple imperforate anus the case is easily explained by a reference to the mode of development of the anal opening, namely, by "invagination of the outer surface and the opening of a communication between it and the intestine." True, we have here an imperforate anus, but we have something more;

there is the absence of the third part of the rectum, and therefore this explanation cannot hold good in the case before us. I am inclined to the view that in this case there did take place, to a certain extent, at least, this "invagination of the outer surface," for there is a well-marked depression in the region of the anus; and if the lower portion of the rectum had been fully developed, the probability is that we would not have had even a case of imperforate anus on this occasion. There is evidently a considerable portion of the lower bowel not developed, besides the communication existing between the rectum and urethra. By a reference to the drawing it will be seen that the rectum is prolonged into a narrow tube, which terminates in the membranous portion of the urethra. This can best be explained by a reference to the development of these parts. At a very early period of embryonic life (about the fourth week) there is "a common opening for the intestine, the generative, and the urinary organs, *i.e.*, a *cloacal* aperture." By the development of tissue a septum is formed between the *sinus uro-genitalis* and the intestine. In the present case this septum was not fully developed, and so we have the remains of a condition, existing in early embyronic life, persistent by this opening between the bowel and urethra. Regarding the non-development of the third portion of the rectum I am unable to offer any explanation.

It thus appears that this rare malformation has been caused partly by the want of development of the tissue which forms the septum between the *sinus uro-genitalis* and the intestine, partly also by the want of development of the lower portion of the rectum, and possibly also to a certain extent by the invagination of tissue which forms the anal opening not having proceeded far enough.

This case is one exceedingly rare. I am not aware of any case exactly similar having occurred. Dr Maxwell Ross has drawn my attention to the fact that Holmes, in his *System of Surgery* (vol. v. page 814, 2nd edition), states that the rectum may communicate with the urinary tract, but relates no cases in detail. He says that "communications between the lower end of the bowel and the male urinary organs, with imperforate anus, constitute the most troublesome variety" of imperforate anus. He states farther that the communication may be either with the urethra or bladder, in which case he expresses the belief that it can be reached from the perinæum.

Dr Maxwell Ross has also drawn my attention to the fact that the *Medical Times and Gazette* of 22nd September 1877 records a case not exactly identical, but presenting features in many respects resembling this one. It is designated, "Case of Imperforate Anus and Fistulous Opening into the Bladder." It is from the *Australian Medical Journal* of March of that year, and is as follows:—"A male child was brought to Dr Rowan for advice (11th April 1876) three days after birth, having an imperforate anus, and the abdomen being very distended and tender. No depression or other sign of the position of the anus existed, and an incision was made at the centre of the fundament large enough to admit the index finger as a guide. On cutting to a depth of about two inches and a half, a fluctation in the line of the rectum could be felt. On opening this fluctuating mass, a large quantity of meconium and gas escaped, with immediate relief. Oiled lint was passed into the wound, and replaced every morning for about a week, after which a bougie was introduced every second or third day to keep the aperture open. Nothing was heard of the case from May until February 1, 1877, when the passage was found closed, so that a probe could not be introduced. For two months nothing had passed by this aperture, the motions having come away during that time by the penis until the day before the child's arrival, when the foreskin had become so much closed that it could only pass water with great pain and difficulty. This was remedied by circumcision, and on 6th February an attempt was successfully made to restore the natural passage. Since the second operation no fæces or flatus passed by the penis since two days after the operation."

This case differs in several particulars from the one we are now considering. It was eight months after the birth of the child that fæces first came through the penis, from which we naturally conclude that the opening between the bowel and the bladder was not congenital. In my case there was a well-marked anal depression, but no trace of that in Dr Rowan's case; and I am inclined to the belief that in his case the rectum was more fully developed in its lowest part, which would greatly aid the success of the operation.

I now come to the important question of treatment. In the case of congenital malformations of the internal organs it is impossible to diagnose accurately the true condition of parts during life. This fact must ever be borne in mind when considering the very important question of treatment. It was easy, in this case, to make out that there existed a communication between the lower bowel and the urinary tract, and it was perfectly evident that this communication took place somewhere in front of the bladder, seeing that the urine was passed regularly without any admixture of fæces, but nothing further could be accurately diagnosed.

So far as I am personally concerned, my action was undoubtedly the right one, namely, to call in an experienced surgeon, and to place the case unreservedly in his hands.

Mr Bell adopted a certain course of treatment without saving the child's life, and it is a very important question for consideration and discussion, Was his treatment, unsuccessful as it was, the proper treatment in this case? I have no hesitation in answering that it was, and that the autopsy showed that it was not possible to have saved this child's life.

I think all surgeons will agree in saying that an attempt should be made to reach the bowel through the perinæum. In this case we had a well-marked depression in the region of the anus, and we had a right to expect that if the bowel was to be successfully reached it was by making an incision in this region. On looking at the parts *in situ*, or at the drawing, it is evident that in this case it was possible to pierce the bowel by a trocar and canula, or even by a bistoury; but all surgeons must admit that something more was necessary to ensure success. No operation could be regarded as satisfactory which did not establish a free exit for the fæces through this artificial anus.

This was not simply a case of fistulous opening between the rectum and urethra complicated with imperforate anus. There was, in addition, a considerable deficiency in the development of the rectum. To have enlarged the opening sufficiently to have cut down upon the rectum would have been an operation such as few newly-born children could have survived; and even if the child could have survived such a severe operation, the want of development of the third part of the rectum would have prevented a successful issue of the case. Holmes, in his *Surgery*, *ut supra*, says, "Should the gut terminate in the urethra, the rectum will only be deficient in its lowest part, and its termination will be accessible from the perinæum. Therefore the proper course is to begin by performing the usual exploratory operation in the perinæum, and, if the rectum be met with, to separate it from its connexions, if possible, and draw it down to the skin." It will be observed that the learned surgeon here uses in the same sentence twice that little but most significant word "if;" and he also adds, "I am not aware, however, of a case in which this has been successfully accomplished." It thus appears that successful operations in such cases as the one now under consideration, by cutting through the perinæum, are either unknown or extremely rare.

If success could not be accomplished by cutting through the perinæum, could not success have been attained by a supra-pubic operation? This operation, at the time, was suggested to me by a young surgeon of this city, who suggested to cut down upon the bowel from the groin, and, having found the rectum, following it downwards till it terminated in the urinary tract, and afterwards to have opened a passage for the fæces through the perinæum. Most surgeons will admit this is an operation which would at once have proved fatal to a child only a few days old, and therefore the only other possible operation was colotomy.

This operation in the newly-born child is not one that will commend itself in the present day. It can scarcely be considered as within the domain of practical surgery. Holmes, in his *System of Surgery*, states that M. Guersant opened the colon eleven times in the groin and once in the loins, without saving one of his patients, and adds, "I have only been able to find a single successful case recorded since the publication of M. Rochard's paper" in 1859, although that publication must have given rise to the performance of many similar operations. "In that case, which occurred under the care of Dr Pooley in the State of New York, the operation was performed on an otherwise healthy male child, in whom there was imperforate rectum and a communication with the bladder. The report was published six months after the operation, the child being then in perfect health. The fæces passed about twice a day from the artificial opening, and the fæcal discharge from the bladder appeared to have quite ceased. M. Giraldès, however, had a case of colotomy for imperforate anus, in which the child lived 2½ months, and died from another cause." It thus appears that the statistics of colotomy are quite against this operation for congenital malformation of the bowel. I have always maintained that even though an artificial anus could be made anywhere above the pubes by means of colotomy, such an operation is not to be commended in the newly-born child. It is one thing to make such an artificial anus in the adult, but quite a different thing in the helpless infant. It was far better that the child should die thus early than merely to have its days prolonged, even for a few years, to a life of great pain and extreme misery.

I have only to add, in conclusion, that the preparation having been divided in the mesial line, I have really now two preparations, or rather two halves of one preparation, each of which illustrates very well this rare and interesting malformation. The one will be presented to the Anatomical Museum of the University of Edinburgh, and the other to the Museum of the Royal College of Surgeons of Edinburgh.

IV.—RARE INJURY: RUPTURE OF LIGAMENTUM PATELLÆ, WITH TRANSVERSE FRACTURE OF PATELLA.

By M. GARDINER, M.B., L.R.C.S. Ed. House-Surgeon in Mr Bell's Wards, Edinburgh Royal Infirmary.

W. S., aged 33, maltman, was admitted to Ward XII., Royal Infirmary, on 10th January, complaining of pain about the knee and inability to walk or stand.

Patient is a heavy, powerful man, and stated that while at work he had tripped over a bag and fallen heavily on his knee on the floor. While falling he had tried to recover himself by a backward jerk, but had failed to do so. Trying to rise, he found he was not able, and when set on his legs he could neither walk nor stand without assistance.

On examination a large, tolerably definite swelling was seen over the knee-cap. Touch proved this to be fluid. The movements of the joint were limited, extension being almost abolished. Fluctuation was also to be felt on each side of the ligamentum patellæ, but the attachment of that structure could not be defined, and the finger felt as if it could pass right in between tibia and femur. Rupture of the ligament was therefore diagnosed. Owing to the history, attention was next directed to the patella itself, patient stating that he thought it was broken. On account of the swelling the patella could scarcely be defined, and owing to the rupture of the ligament its superficial area did not seem increased. Fracture was therefore only suspected, but not absolutely diagnosed.

The swelling of the knee and surrounding tissues increased, but finally subsided under the treatment adopted, and on the fourth day the joint had so far returned to its normal state as to allow of a thorough and perfect examination. This proved the suspected fracture to be real.

It is difficult at first sight to account for both rupture and fracture, but the probability is that the backward jerk described by patient ruptured the ligamentum, and that the blow on the floor fractured the patella. Effusion was very rapid and very extensive, seen principally over the patella and on both sides of the head of the tibia. Hot fomentations applied at first did not seem to answer well, but the application of dry cold proved of great service in reducing both swelling and pain. The case is doing well.

V.—ON A CASE OF SINUSES TREATED BY SPONGE-GRAFTING.

By W. Winslow Hall, lately House-Surgeon to Dr Gray's Hospital, Elgin.

On the 10th of January 1883, a short and sturdy young man came to Gray's Hospital, Elgin, suffering from a chronic swelling and sinuses in his right forearm. He said that seven months before admission he noticed a hard knob on his right ulna. This knob was painless unless firmly pressed, and though it grew steadily its growth was slow. He rubbed tincture of iodine over the skin of the forearm, and the lump grew larger and softer till, about a month after the beginning of his trouble, a medical man opened it, and a small quantity of pus and blood came away. He poulticed the wound, but the arm remained unimproved. Five months afterwards he went to another medical man, who made a larger wound in the same situation, but no pus was found. From that time until admission nothing had been done to the arm.

As regards previous illness, family, and social history, nothing worthy of note could be ascertained.

On examining the right forearm there was seen midway between the olecranon and styloid processes of the ulna a little trench, measuring half an inch in length, and quarter of an inch in breadth and depth. Its floor was yellow and watery, its edges were sharply defined, the discharge was sero-purulent, there was no pain, nor was there any sign of cicatrization. The surrounding parts were swollen and tender-looking, with here and there small red lumps. The posterior border of the ulna could be traced from the elbow to the sore, but at that point it was obscured by the thickened tissues. On pressure in the interosseous space there was pain, and some pus made its appearance in the sore. On probing it was found that the sore was an outlet for four short sinuses. Sinus A was one inch in length, and ran up towards the elbow. Sinus B was one and a half inch in length, and ran transversely across the posterior surface of the arm towards the radius. Sinus C ran deeply towards the anterior aspect of the interosseous membrane, and was one and a quarter inch long. Sinus D ran under the skin towards the wrist, and had a length of rather more than one inch. No dead bone could be felt in connexion with any of the sinuses.

For seven days after admission the sore was dressed with carbolic oil, and the arm was bandaged in order that the surfaces of the sinuses might be brought together. But as this failed to improve matters, a solution of nitrate of silver (gr. 8 in ℥j.) was injected into the sinuses every second day, in the hope that their hardened lining might be stimulated to healthy action. This failed also, so, on the sixteenth day after admission, sinus D was slit completely open. Its floor was hard and whitish and irregular, and no dead bone was to be found. The wound was dressed with carbolic oil, and a piece of lint was placed between its edges. Next day, 27th January, the lint was firmly adherent to the raw surface, and could not be separated without causing bleeding. On the 30th solid nitrate of silver was applied to the floor of the sinus. On the 1st of February the sinus showed a disposition to unite superficially, forming a cavern at its distal end; and though this tendency was met by daily packing with lint and frequent use of lunar caustic, the condition of sinus D threatened to become as bad as ever.

While this was going on it struck me that sponge-grafting might be of use. There were in this arm four cavities with hardened walls. It seemed to me that decalcified sponge introduced into these cavities ought to act at first after the manner of a seton, causing irritation and consequent breaking down of the brawny walls; that then the released capillary loops would find their way into the meshes of the sponge, that connective tissue corpuscles would accompany the capillary loops, and that finally a mass of cicatricial tissue would take the place of both sponge and sinuses. Accordingly, on 9th February, this idea was put into practice. A strip of fine sponge, one and a half inch by a quarter inch, had been soaked in dilute nitro-muriatic acid for twenty-four hours, then washed in water, soaked in carbolic solution for twenty-four hours, and washed a second time in water. This was tied to a piece of thin catgut threaded on a long needle. A director was thrust to the bottom of sinus A; the point of the needle was passed down to the end of the director, and was then brought through the skin. The director was withdrawn, and by pulling on the needle and catgut the sponge-strip was made to fill the sinus from top to bottom. The catgut thread was cut off at the level of the skin, and the wound was dressed with carbolic oil.

10th February.—Some pain over the sponge-filled sinus, and no discharge. On pressure, pearly pus came from the needle puncture, and rusty pus from the original opening of the sinus. Dressed with carbolic oil.

11th February.—The pain is worse. A blush, with no definite edge, extends from the wound as far as the elbow. On squeezing the sponge, pus appeared as before. Poultices substituted for the carbolic oil.

12th February.—Pain is less severe, but the blush is still visible. The pus had to be squeezed out as usual.

13th February.—Pain and blush almost gone. Squeezed the sponge. Sinus D, which was patent on the 9th, is now closed by healthy granulations.

23rd February.—Still poulticing the region of the sinuses. No pus can be squeezed from the sponge, but a little blood wells out of the needle puncture. The sore is much smaller than when patient was admitted.

26th March.—At the suggestion of Dr Ross, an ordinary seton was passed through the whole length of sinus C.

5th April.—Progress has been slow, but now the sponge placed in sinus A seems quite absorbed. A papilla of granulation-tissue replaces the small fragment which projected into the sore. On this day the only remaining sinus, sinus B, was treated by sponge-grafting. A piece of sponge had been soaked for forty-eight hours in dilute nitric acid, then for a fortnight in carbolic lotion (1 in 40), then for a week in water alone. A strip of this prepared sponge was introduced in the manner before described, but this time care was taken to cut the catgut thread so that it retracted at once below the level of the skin.

13th April.—The arm is doing well, and there has been no inflammation. The sponge is full of pus. The other sinuses are as before.

18th April.—Removed the seton from sinus C.

20th April.—Sinus C has healed. Sinus B seems unchanged. A fragment of sponge projects from its open end.

23rd April.—Granulation-tissue has replaced the visible fragment of sponge.

7th May.—All the sinuses have now healed. There is no induration of their former sites.

10th May.—Patient was sent home with his arm cured.

Some months afterwards he reappeared at the hospital to show his arm. There was a small pliable cicatrix, but otherwise the limb would have been taken for a normal one.

The foregoing facts suggest that obstinate sinuses may be easily, painlessly, and successfully treated by means of sponge-grafting. Since Professor Hamilton first brought his discovery into notice this method has often been used for the cure of ulcers, but it seems to me that it may be turned to advantage in several other surgical affections. As regards the treatment of sinuses, the method is a slow one, but it is sure. It entails little or no pain to the patient, it is easily carried out, and it is followed by no deformity. In the case of sinus A, mentioned above, there was a threatening of diffuse inflammation after the sponge had been planted, but it passed away quickly, and was, I think, due to the presence of too much carbolic acid in the sponge. What seems to me the greatest difficulty in sponge-grafting is the liability of the secretions to accumulate and decompose. To prevent this I have been in the habit of squeezing the pus from the sponge at each dressing, but this is hardly calculated to encourage the growth of delicate capillaries and connective-tissue corpuscles, and some better plan is desirable. Poultices favour the growth of granulation-tissue; and as they are credited with a "drawing" power, it is possible they may form as good a dressing as anything else. Certainly while they were being applied to the arm in question there was less need of squeezing than at other times. It is worthy of remark that the use of an ordinary seton in sinus C was followed by more rapid healing than any of the other methods, but it was a painful process, and gave rise to a good deal of local inflammation.

For permission to publish the notes of this case I am indebted to Dr Ross, visiting surgeon to Dr Gray's Hospital, Elgin.

VI.—LARYNGOTOMY WITH RECOVERY.

By Frank J. Mackinnon, M.B. Ed. and M.R.C.S., late Resident Medical Officer to the Cowgate Dispensary.

The drawbacks one has to contend with in the exercise of his profession in connexion with dispensary work are legion. Dirt, bad ventilation, ill-lighted, over-crowded rooms, reckless disregard of the ordinary rules of health, exaggerated ideas of sickness, or ignorant blindness to some grave malady, too often add to the practitioner's difficulty and call for either prompt treatment or no treatment at all. To all such practices these obstacles are more or less common, but in our Edinburgh Cowgate they are peculiarly so.

The following case, which I have been asked to publish, will illustrate some of the above points.

On Friday, 21st December, at 2 P.M., an urgent message was sent down to the Cowgate Dispensary from Daniel Burns, residing at 16 Bell's Wynd, Cowgate. As his wife, the messenger, did not wait till I saw her, there was no alternative but to proceed at once to the above address and see the true condition for myself.

Having entered the main door and ascended about half of the stairs to the third floor, on which the patient lived, I was called to from above to hasten my steps as the man was dying.

On entering a small, miserable room at the end of a passage, I found the patient, a young man of 28, seated half-naked on one of the two beds which, with a few chairs and a table, composed almost the whole furniture of the household. His semi-livid, agonized expression at once showed he was suffering from some grave obstruction to breathing. The perspiration was rolling down his face, his eyes starting from their sockets, while the extraordinary muscles of inspiration were markedly brought into action. He frantically clutched his throat from time to time, to indicate to me the seat of the constriction. On passing my finger down his throat I detected intense œdema of the glottis and surrounding parts. In less than a minute his dyspnœa became worse, and passed suddenly into complete asphyxia, his respiration ceasing, and his face presenting the characteristic livid appearance, while convulsive spasms shook his whole frame. One of the three women in the room here exclaimed, "Poor man, he's gone!" I felt that *immediate* action alone would bring him round, so, pulling his head well over the bed, I drew from my pocket a tenotomy knife (the only one I had with me) and performed laryngotomy, first by dividing the skin in the mesial line from the cricoid to about the middle of the thyroid cartilage, and then plunging the blade into the crico-thyroid membrane and carrying the incision a little upwards into the thyroid cartilage, sufficient to admit the handle of a teaspoon, which I now introduced and turned at right angles to keep the wound open. I then passed my little finger down the windpipe to make sure all was clear. I next commenced artificial respiration by Howard's method, and in about half a minute the patient coughed out some clot and mucus and began to respire regularly. The hæmorrhage from the crico-thyroid artery and such veins as were cut gave some annoyance, especially when my left hand was engaged in performing artificial respiration; but although it entered the wound no harm came of it, owing to the pendant position of the patient's head and shoulders. In a short time it stopped. Hot steaming flannels were laid around the opening until aid arrived from the Dispensary—for up to this point I had been single-handed. One of the students from the Dispensary at length arrived, and was despatched for tracheotomy tubes. One being selected, we next adjusted it, and then laid the patient's head on the pillow in bed. The steaming flannels were continued until a bronchitis kettle was brought and put into play. A curtain was then erected over him, while a second was nailed over half the window to compensate for its miserably draughty condition. So far apart were the sashes of this the only window to the apartment, that some pigeons in a cage outside were easily fed, throughout the patient's illness, with bread and milk through the aperture. Owing to the kindness of Mr Joseph Bell and Mr A. G. Miller, the patient was twice seen and the case examined. It was one of acute laryngitis with intense œdema glottidis.

For several days his life hung by a thread, for, besides the laryngitis, he was just recovering from an attack of rheumatic fever, and was suffering at the time from bronchitis, which gave to both the day and night nurses no little trouble.

The *treatment* at first adopted consisted of local astringent applications to the throat, hot fomentations outside, and a saline aperient, in the form of Henry's solution, to regulate the bowels. For his bronchitis careful poulticing was continued several days, and wine of antimony taken internally. At the suggestion of Mr Bell, who believed he was not free from the specific taint, the astringent applications were discontinued, and iodide of potassium substituted in 5 gr. doses three times a day.

Latterly great relief was experienced by removing both tubes and thoroughly cleaning them, and carefully dressing the wound and surrounding parts with lint and vaseline before replacing them. Liquid food,—chiefly milk,—ice, and jelly formed his diet.

After the following Tuesday he began steadily to improve. On the evening of Monday, the 31st, ten days after the operation, I removed the tubes altogether, as respiration by the natural passage had been re-established. By next day the wound was found to have contracted and closed as far as breathing was concerned. Inhalations of steam, with tinc. benz. co., and counter-irritation over the larynx, were continued until all œdema had subsided and the patient had completely recovered.

VII.—UTERINE DISPLACEMENTS, AND THEIR TREATMENT BY MEANS OF MEDICATED TAMPONS.

By Robert Bell, M.D., Physician to the Glasgow Institution for Diseases of Women.

(*Read before the Edinburgh Obstetrical Society, 13th February* 1884.)

Although versions and flexions of the womb may in a few exceptional cases exist without producing very urgent symptoms, and though these displacements do not endanger life, they as a rule cause so much discomfort and give rise to such a variety of reflex symptoms and painful sequelæ that we cannot but look upon them, in consequence of their frequent occurrence, as one of the most prolific factors in the production of intense suffering in women. If, therefore, any mode of treatment has been found of service in reducing, in however small a degree, the train of painful concomitants of these affections, it is a duty one owes to his fellows to make his results known, and endeavour to obtain an independent trial of his method by unbiassed observers. This, then, must be my apology for occupying your valuable time this evening.

When, however, I speak of the treatment of these displacements by means of medicated tampons, it is not to be supposed for a moment that I do not value, and that most highly, the various mechanical supports that have been devised by so many ingenious and eminent members of the profession, and which appliances have proved of such immense service in the treatment of the affections under discussion. There are, however, certain conditions of the uterus where the introduction of a pessary would produce much more pain and a more serious array of symptoms than the malposition, if left alone, would tend to do, and it is in such circumstances that the tampon, in my experience, has proved of such eminent service. Since I had the honour of addressing this Society on the same subject about two years ago, I must admit I have had reason to modify my views very considerably. At the same time, it must be confessed I have now, after a very extensive experience of this method of treatment, even greater confidence in its efficacy in properly selected cases than I had then. When we remember that flexions, and retroflexions in particular, have proved in the most experienced of hands so intractable, when we have such an eminent authority as Schroeder give as his opinion, when speaking of flexions, that "of all these troubles retroflexions are the most disagreeable, for, once actually present, they almost never disappear spontaneously, and obstinately defy treatment," does it not behove us to look for some effectual plan? But this is not Schroeder's view alone. His conclusions are homologated by many others whose opinions are of equal value with his. If, then, it can be demonstrated that another mode of treatment, though it has the disadvantage of entailing a very considerably greater amount of trouble than the application of a pessary necessitates, has been the means of effecting a cure where the pessary has failed to give relief, it surely is not unreasonable to ask that this method should have a more extended trial, and its merits or demerits be freely discussed.

Before entering on a description of this plan of treatment, it will perhaps be advisable to travel over somewhat familiar ground and glance at some of the symptoms induced by the various displacements of the organ. This, however, will not, I trust, be time wasted, as so many of the pathological conditions induced by the flexion are not so thoroughly relieved when the cause is removed by the application of a pessary as when the uterus is supported by the tampon. This will be obvious when we recognise the fact that the tampon acts also as a depleting agent. We are all familiar with the great power glycerine exerts in abstracting fluid from an œdematous tissue; but it may not be equally well known that this power is very much enhanced when the glycerine contains alum in solution. Moreover, the presence of alum, by virtue of its astringent properties, gives tone to the vaginal wall and the uterine wall and supports. The tampon, therefore, when saturated with a solution of this salt in glycerine, and properly applied in flexions or versions, acts in three different and beneficial ways—1st, as a support; 2nd, as a depleting agent; and 3rd, as an invigorating agent to the uterus and vagina. If we take a typical case of retroflexion and observe the objective symptoms only, what do we find on making a digital examination per vaginam? If the displacement has existed for some little time, the uterus as a whole will be found enlarged and flabby. This, of course, may be partly ascribed, in one who has borne children, to subinvolution of the organ; but that it is not always due entirely to this fact is evidenced by this hypertrophy occurring in nulliparæ who are subjects of retroflexion. The os and uterine canal will be gaping and patent throughout, and from it will ooze a continuous stream of acrid, muco-purulent discharge, often so irritating in its nature as to induce vaginitis. The vaginal portion of the cervix is excoriated; its mucous membrane bulges out, producing ectropion. The uterus, but more especially the retroposed fundus, is acutely sensitive to touch, and there is frequently hyperæsthesia of one or both ovaries. Now it is quite evident that all these symptoms are not due to the mere fact of the organ being retroflexed, but to the effects of the altered relations of the fundus and body to the cervix, and the consequent traction upon the uterine ligaments and thus upon the bloodvessels, but more especially upon the veins. The hypertrophied organ, if complete rest is not enjoined, may by degrees become more and more prolapsed till at length the flexion will be cured at the expense of a procidentia. We will not, however, follow the progress of the malposition so far as this, but study it only as a retroflexion. By degrees, of course, the circulation will accommodate itself to the altered circumstances, and the acute stage gradually give place to the chronic, when sensitiveness to touch will in like ratio diminish. Yet the general symptoms of distress do not disappear as a coincidence, nor have the difficulties of treatment been removed. I have seen, in a considerable number of instances where a retroflexion has been suddenly produced by a fall—very frequently on the ice—most obstinate metrorrhagia induced. In these cases, however, it was noteworthy to observe that the train of acute symptoms did not present themselves, as congestion was naturally absent. Yet what, to my mind, is an important factor of inflammation of the uterus in every case of retroflexion was present, viz., the checking of the venous return-flow by compression of the walls of the vessels at the point of flexion.

By virtue of the tubular and elastic construction of the arteries the circulation in these is not much interfered with at first, and so the blood is constantly pumped into the uterine tissues in larger quantities than it can be carried away by the veins, in consequence of their flaccid walls being unable to resist the compression exerted upon them at the seat of flexion. These frequently give way, and then we have metrorrhagia, or, if they do not rupture, congestion supervenes. That this is due to the interference with the venous circulation is proved by the fact that if the uterus is immediately replaced and retained in its normal position the hæmorrhage will speedily cease and the natural order of things be soon re-established. This compression, when hæmorrhage is not induced, further reflects an influence on the ovaries, in consequence of the ovarian veins having to do duty for the uterine vessels. These are constantly surcharged, and congestion of the ovaries may result. In this way we can account for neurasthenia of the ovaries in subjects of metritis and endometritis, which neurasthenia entirely disappears when the inflammatory condition of the uterine tissue is removed by proper treatment, thereby demonstrating that the congestion of the one is entirely dependent on that of the other, and that the oöphoritis is, as it were, a prolongation of the metritis through the medium of the ovarian veins. When we consider these veins are devoid of valves, this is rendered still more palpable. If this is the correct explanation of the congested state of the organ and its lining membrane in retroflexion, it also explains the *modus operandi* in the production of the general hypertrophy which rapidly becomes a part of the disease, and aids largely in making the retroflexion more and more acute. True, the copious secretion of muco-purulent matter in some degree relieves the overloaded tissues, but it does not ease the pathological condition; on the contrary, it becomes a serious symptom of the disorder. On the other hand, the menorrhagia which usually takes the place of the normal menstrual flow gives temporary relief to the local symptoms, but at the expense of the general health, and thus in the long run seriously reacts, by reducing the vitality of the patient, upon the already enfeebled womb.

It will be obvious, then, if we can, while taking advantage of the depleting power which glycerine is known to possess, at the same time augment its power in that respect by the addition of an agent which will simultaneously, by its styptic powers, reduce the arterial supply, and by its astringent properties induce contraction of the uterine muscular fibres, and thus naturally assist in the expulsion of the venous blood,—I say it will be obvious that we will to a very considerable extent counteract the evil effects of the malposition. Now, alum is endowed with these powers in a most marked degree. It has the further advantage—and it is no inconsiderable one, I can assure you—that it does not stain the underclothing of the patient, like some other astringents. It is still further to be recommended because of its effect on the catarrhal discharge, which it coagulates, and consequently prevents its decomposition. By this effect it destroys the irritating properties of the discharge. Under its employment by means of the tampon, as a result of this property, I believe, papillary ulcerations rapidly disappear and hypertrophy of the cervix subsides. In simple endocervicitis, which, I am of opinion, in a great number of instances, if not actually induced, is at least rendered chronic by decomposition of the natural secretions, it proves of immense benefit. If to the therapeutic properties which the medicated tampon possesses we add its ability to act as a support, when properly applied, to the dislocated fundus, and, moreover, that it can be gradually made to exert an increasingly greater amount of power as the hyperæsthesia of the uterus becomes reduced, it must be acknowledged that it can be employed as a pessary when the ordinary vaginal pessary would be a most dangerous instrument to insert. The tampon forms a bed for the dependent fundus to rest upon, and it is easily moulded to suit the exigencies of the case. Each successive tampon by degrees elevates the fundus until it is made to occupy its normal position, while simultaneously the hypertrophy and congestion are being removed by the therapeutic properties of the medicaments with which the tampon is saturated. When the normal position of the uterus has been re-established, it is retained there either by a continuation of the treatment for a little time, or, if it is thought more advisable, by the application of a well-fitting vaginal pessary. It not unfrequently, however, has happened in my experience that the tampon has accomplished all that could be desired, a complete recovery having been the result, and this often when a pessary has been worn for years without affording relief. In like manner, when prolapsus is present, especially when due, as it frequently is, to a greater strain being thrown upon the uterine ligaments and vaginal wall by the constant dragging of a subinvoluted organ, we observe the immense benefit derived from this tampon. It matters not whether the hypertrophy, as in subinvolution, is the primary cause, or whether it is secondary to the prolapsus, which we know often is the case,—I say it matters not how the prolapsus has been produced, or in what manner the hypertrophy has arisen, we obtain the dual effect of the tampon and relief of the symptoms.

Its application is rapidly followed by a reduction in the size of the organ, a cessation of the uterine catarrh, and a healing of any excoriation that may exist. At the same time the uterus rises in the pelvis and speedily assumes its normal position. In cases of ruptured perineum or troublesome retrocele and cystocele it is my invariable habit to precede operative interference by a course of tampon treatment. It tends very much to ensure the success of the operation by reducing the bulk and weight of the uterus, and in consequence renders it more easy to obtain a successful result. For the same reasons this method is most useful in procidentia. I confess this appears, on the face of it, to be a bold statement; but I can assure you, gentlemen, the results I have obtained in what appeared to be most unpromising cases of this disorder are most gratifying. A lady called on me, a few days ago, whom I treated for this complaint some four years ago, and whom I had completely lost sight of. When she appeared I naturally concluded she had returned for further treatment; but, to my surprise, she informed me she had been in perfect health since I last had seen her, and that she had never suffered from any inconvenience in the womb all that time. Notwithstanding the relief she had obtained, it is more than likely that I never would have seen her, or had the gratification and satisfaction of hearing of it, had she not been asked by a lady friend—who was suffering from another disease, however—to introduce her to me. Even if the treatment by tampon does not always so completely relieve as it did in this case, it invariably paves the way to the employment of a ring or other pessary.

In anteversions and anteflexions it appears to me to be the only plan where anything like satisfactory results can be obtained. In anteversions more especially—and, mark me, I do not forget that a greater or less deviation forwards may exist without this being any more than normal; but where the uterus is actually horizontal, the effect of fourteen or twenty-one days' treatment has, in a number of instances, proved most remarkable.

When there is anteflexion, however, the task is not so easy. A case of this kind in a nullipara (which, by the way, is still under treatment), wherein the flexion was so acute that the fundus lay close to and at as low a level as the os, has taxed my patience very much. This patient came complaining of persistent morning sickness, which had been more or less severe all her married life, but latterly had become so inveterate as to be almost intolerable. Besides this, she suffered most intensely at the menstrual periods. After having been treated by several medical men, as she said, for her stomach, I was asked to ascertain if the symptoms could be accounted for by any uterine ailment. The knee of the flexion was more in the body than at its junction with the cervix, and I could by no means get the sound to pass beyond the point of flexion. I therefore proceeded to treat the displacement by pushing up the fundus and supporting it by a tampon tightly and firmly packed in below it. After two or three weeks of this treatment the sickness began to abate, and latterly it quite disappears for two days after each application of the padding; but when this loses its grip, so to speak, the sickness returns to a certain extent. Yet I am hopeful, by persevering with the treatment, to prevent the return of the sickness entirely. Certainly the flexion is not nearly so acute as it originally was, the dysmenorrhœa is very much less, and there is now very little leucorrhœa. Notwithstanding all these improvements, however, the tendency of the fundus to assume its abnormal position always asserts itself, and I am not so sanguine as to the complete cure of the flexion as I might be.[1]

The details of another case may prove more interesting, as the results were all that could be desired. Mrs M., æt. 23; married two years; sterile; menses regular, but always accompanied by severe pain; copious leucorrhœa; bladder very irritable, and consequently desire to micturate is very frequent. On this account she cannot sleep for more than an hour and a half at a time, and very rarely can she lie even for that short time. When the bowels move there is always pain referred to the womb. There has always been dyspareunia. Sexual desire was normal during the first few weeks of married life, but after that it completely disappeared. Patient is very low-spirited and weak. On examination per vaginam the uterus was found to be acutely sensitive to touch, and anteflexed. There was a stricture of the internal os. This examination was made on the 17th October last, and on that day I commenced treatment by reducing the displacement and keeping the fundus in position by means of medicated tampons applied twice a week. My next note was taken on 19th December, when I find the uterus can be manipulated freely without producing pain, and defæcation accomplished without suffering. Urine can be retained during the day for the space of three and four hours, and she sleeps all night without being disturbed by any of the old symptoms. Sound passes easily, and this is unaccompanied by undue pain, and the position of the uterus is normal. There is still, however, a considerable amount of uterine catarrh. *3rd Jan.*—Patient says she has not felt so well for three years as she does now. Menstruated five days ago, and without pain. There is still some catarrh, but the uterus is free from undue sensitiveness. Rectum is loaded with hardened fæces. Ordered an enema, consisting of a pint of thin gruel, with a dessert-spoonful of common salt added, to be used every second day. Applied the tampon. *26th.*—Uterus is in normal position, and free from tenderness. Has again menstruated, and without pain. Expresses herself as feeling quite well, cheerful, and light-hearted. In cases such as this, where there is much uterine catarrh, I am in the habit of supplementing the tampon treatment (which is renewed every three or four days) by intra-uterine medication once a week. This consists of a saturated solution of iodine (320 grams) in liquefied carbolic acid (8 oz.) to the whole length of the canal, or to as great a portion of it as can be reached without employing any undue force. Having first ascertained the direction the canal takes by means of the sound, the applicator, which is made of soft copper wire, is bent accordingly, and, having been covered with a piece of absorbent cotton for two inches of its length, is dipped into the solution and introduced into the uterine cavity, and allowed to remain for a few seconds (I generally allow it to do so during the time I am preparing the tampon). When it has thus been permitted to remain in the uterus it will be found that the uterine walls will have contracted firmly on the instrument, and it will require some little traction to remove it. When the uterus is flabby and patulous and the walls thickened, this will be found to assist materially in removing the diseased condition.

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[1] Since the above was written I have seen the patient on two occasions. The uterus is almost straight, and the vomiting has entirely ceased.

With your permission I will now give details of two cases of *retroflexion* treated on the lines I have indicated.

Mrs B., æt. 35, consulted me on 21st June last. She had one child a year old; said she had never known what it was to feel well since it was born. She complained of severe backache, pain on going to stool, and frequent desire to micturate. She was very weak and low-spirited, and said she had lost very considerably in flesh lately. Menses were regular but copious, and accompanied by severe pain during the whole flow; but this was more intense during the first three days. Being resident in Roxburghshire, her medical attendant had sent her to Edinburgh to consult a specialist, who diagnosed a retroflexion and introduced a Hodge's pessary; but since this had been done the pain in the back had become more acute, and her general symptoms were worse. The pessary being still *in situ* when she called upon me, I removed it. The mucous membrane of the vagina was hyperæmic and sensitive, so that a digital examination was not accomplished without considerable pain. This, however, revealed an acutely retroflexed uterus, which was also very much hypertrophied. The whole organ was very painful to the touch, but this sensitiveness was very much aggravated at the fundus and body. The os was gaping and the whole canal was patulous, and from the os was exuding a mucopurulent discharge. I contented myself with the application of a tampon behind the fundus, which was removed at the end of three days, and then another was applied. This bi-weekly application of the tampon was continued for a fortnight, when the menses appeared. The flow lasted for seven days, and, although very copious, it was accompanied by considerably less pain than on the previous occasion. When the discharge had ceased the treatment was again resumed, but, in addition, the carbolic acid and iodine solution was applied once a week to the whole area of the uterine canal. This routine was carried out for two months, during which time the symptoms steadily improved, and the dysmenorrhœa and menorrhagia also abated, the patient expressing herself as feeling very much improved in every way. She could now walk a little distance without pain, whereas before every movement was accompanied by intense suffering. The uterus was at this time retroverted, the flexion having completely disappeared; but there was still considerable hypertrophy, and the catarrhal discharge was copious; this, however, had now ceased to be purulent. The vagina, too, was free from the hyper-sensitiveness that had previously existed, and the uterus, except at the fundus, was also free from tenderness. The symptoms having so far improved, the bi-weekly attendance was discontinued; and from this time till the middle of October I only saw the patient once a week. At this date she returned home, feeling quite well. At my request she came to see me after the next monthly period had passed, when she informed me it had continued only four days, was moderate in quantity, and free from pain. She had been going about her usual household duties, but said "over-fatigue always made her feel she had a back." The uterus was, however, in good position and of the normal size; but as a precautionary measure I introduced a Hodge's pessary, which she is still wearing. I have heard from her several times during the last two months, and she expresses herself as feeling quite well.

In conclusion, I will narrate one other case, which is still of more interest than the preceding, because the symptoms were more aggravated and the results as satisfactory as they could possibly be.

Mrs M., æt. 30, married seven years, nullipara, consulted me about two years ago in consequence of severe and prolonged menorrhagia. Patient was weak and anæmic. She said she was seldom free from discharge for more than a day or two at a time, and there was, indeed, considerable hæmorrhage when I first saw her. At first I was inclined to attribute the flooding to the presence of a fibroid, as a considerable tumour could be felt in the recto-vaginal *cul de sac*. This, however, proved to be the hypertrophied fundus retroposed. The whole uterine texture was flabby and hypertrophied, but not at all painful to touch. The canal was patulous and admitted the sound readily, which revealed a granular condition of the mucous membrane. Having rectified the position of the organ, I applied fuming nitric acid to the whole extent of the canal, and introduced a tampon behind the body and fundus, and directed the patient to use an ergotine suppository (4 grs.) every six hours, and to remain quietly in bed. Three days afterwards the tampon was removed, when it was found that the hæmorrhage had been arrested. Another tampon was applied, and allowed to remain for a like period, and the ergotine suppositories ordered to be continued every twelve hours instead of every six. On this second tampon being removed there was detected a slight oozing of coloured discharge, so fuming nitric acid was again applied, and the tampon treatment persevered with. It was not deemed necessary to have recourse to the caustic again, as the hæmorrhage was checked so far. There still was present, however, considerable menorrhagia for some time afterwards, and the menses recurred too frequently, but these gradually became more normal, both as to time and quantity, under a weekly application of the carbolic acid and iodine solution, and a bi-weekly use of the tampon. The uterus also became reduced in size and attained its natural position, so that by the end of four months every sign of disease had disappeared. I did not deem it necessary in this case to introduce a pessary into the vagina, as the cure seemed complete, and the patient expressed herself as feeling so well. I did not see her again till the end of last year, when she called upon me, greatly distressed in her mind, though she looked the picture of health. She said she was afraid some other disease had attacked her, as she had not menstruated for four months, and that there was a swelling in her abdomen. Her fears, however, soon gave place to joy when I was able to inform her that she was pregnant, and that this alone accounted for her symptoms.

I should, perhaps, add that the tampon varies in size with that of the vagina, and that it is as well to attach a piece of fine cord to it to make its withdrawal easy of accomplishment. The proportion of alum to glycerine is one in eight, and to every eighty ounces an ounce of boracic acid is added to keep the tampon from becoming fœtid, which it otherwise would do if the discharge from the uterus is at all copious. The tampon itself is composed of carded cotton.

VIII.—NOTE ON AN ATTEMPT AT SUICIDE BY CARDIAC TRANSFIXION.

By an ASYLUM ASSISTANT.

I VENTURE to put this case on record, thinking it may possibly interest some of the readers of this Journal.

The patient, C. S., was an elderly lady, in confinement in an asylum on account of her suicidal proclivities. For many years she had suffered intense and almost constant agony from neuralgia, and at a later period mental anxiety on account of domestic matters was superadded. Quite suddenly the neuralgia ceased to trouble her, but coincident with its disappearance, and replacing it, came the melancholia under which she now labours. She became dull, listless, and apathetic, and the one end and aim of her life seemed to be the termination of it by her own act. Probably she was under the influence of certain delusions even then, but she gave no distinct expression to them for many months—indeed, not till after the occurrence I report, and then only on a very few occasions. Her intelligence remained almost as clear as ever, and this rendered it all the more difficult to take sufficient precautions to prevent her accomplishing the object of her desires.

Every effort was made to keep her at home, but several determined and very nearly successful attempts at suicide on her part while there induced her relatives to remove her to an asylum.

For some months after her admission she remained in very much the same state—was dull and listless, but very rational in her conversation and her letters. The close and careful watch kept on her prevented her actually attempting any injury to herself, but there was no reason to believe that the tendency was less strong than before. At last she saw her opportunity. Just after getting into bed she was observed to have become suddenly and violently ill, and medical aid was summoned at once. On its arrival she was found to be quite unconscious, very pale, skin cold and clammy, pupils widely dilated, but there was no conjugate deviation present; the features were drawn and altered, and the head was rolled rhythmically from side to side, patient moaning slightly at times. The radial pulse on the right side was very weak, that on the left almost imperceptible—rate 78 per minute. The left arm and leg were quite paralyzed, so far as could be made out. The right arm was lifted and let fall feebly and aimlessly now and then. She had vomited a little, but no deleterious substance could be detected in the rejected matter by the rough examination possible at the time.

On palpation over the præcordia the cause of this rather puzzling condition was discovered. A knob about the size of a large pea was felt adhering to the chest-wall, in the situation of the apex beat, and this proved to be the head of a large steel shawl-pin, about 3⅜ inches long, which the patient had succeeded in secreting, unobserved by the attendant in charge, and which she had thrust right into the chest, at the situation mentioned above, the part embedded being directed slightly upwards and inwards, and measuring about 2¾ inches. It was at once removed, and stimulants administered, and almost immediately the heart's action began to gain in force. The pulse became stronger and steadier, and consciousness slowly and gradually returned. For some time there was very urgent dyspnœa, and patient complained much of pain in the præcordia, but these unfavourable symptoms diminished as time went on, and after an hour had passed she was much better; the paralysis of the left side had disappeared; the pulse was steady, and of fair strength—rate 108 per minute; and she was quite conscious of what transpired around her. Four hours after the occurrence she was sick again and vomited a little; but this soon passed off, and she fell asleep, and slept at intervals during the rest of the night, stimulants being given frequently in small doses. On the following day she complained of some pain at the site of puncture, and of headache, but was otherwise pretty well, and her recovery after this proceeded without interruption. Some months have now elapsed, and no trace of the injury can be detected.

It appears to be practically certain that the pin transfixed the heart, probably at a point very near the apex of the organ. The elaborate analysis of cases of heart wounds in Holmes's *System of Surgery*, vol. ii. pp. 599-610, renders it unnecessary for me to do more than simply to refer to it for a *résumé* of the subject. Perhaps the case alluded to in that article, of the thrusting of a long gold needle into the heart, is the most similar to mine on record, but fortunately the issue here was very different. For the benefit of the curious in such cases, I may be permitted to refer to the ingenious Mrs Aphra Behn's account, in *Oroonoko*, of the tigress which lived comfortably for many years with seven bullets of lead in her heart. After this, it is not surprising that the authoress should announce heart wounds to be anything but necessarily fatal.

Perhaps the chief interest of the case recorded here is its bearing on Mr Westbrook's proposal to aspirate the right auricle in cases of acute and intense pulmonary congestion with over-distention of the right side of the heart. The part of the organ to be operated on is, of course, different from that involved in this experiment, but it is not quite clear that the results would be less serious; and even Mr Westbrook appears to prefer to adopt the measure only in cases where all chance of recovery has disappeared. Perhaps other less heroic plans might obviate the disappearance of all chance of recovery. If not, it is doubtful whether it is worth while to torment the last hours of a patient who is already moribund. At anyrate I am convinced that my patient made a very narrow escape—so narrow that I cannot but think cardiacentesis out of the range of practical surgery.

Part Second.

REVIEWS.

The Cartwright Lectures, delivered before the Alumni Association of the College of Physicians and Surgeons, N.Y. By WILLIAM T. BELFIELD, M.D., Lecturer on Pathology, Chicago.

OF late American medical men have been thinking and writing a great deal about germs, sepsis, and antiseptics. Of the recent productions on this subject, undoubtedly the best we have seen is the series of lectures given by Dr Belfield "On the Relations of Micro-Organisms to Disease." The second of these lectures is devoted to "Sepsis and Antiseptic Surgery." This is an able and most interesting review of the work of Pasteur, Koch, Billroth, Lister, and many others. We had marked many passages for notice, but these are too many to quote, or even refer to, without copying almost the whole lecture. We shall have to content ourselves and our readers with a few extracts, in which we shall not attempt to give a consecutive *résumé* of the lecture, but merely furnish examples of the lecturer's style.

In speaking of the researches of Klebs, he says, "A series of experiments upon animals showed that while the injection of putrid fluids, containing naturally myriads of bacteria, was followed by continuous fever and metastatic abscesses, *i.e.*, pyæmia, the injection of the same liquids after filtering through clay, and thus deprived of solid particles, including the organisms, was followed by fever just as intense, though transient, but never by metastatic abscesses, *i.e.*, septicæmia. . . . . Billroth concluded, as the result of much careful clinical and experimental observation, that the presence of bacteria was the result, and not the cause, of certain changes in secretions and tissues. . . . . But there soon appeared from various sources, notably Koch and Pasteur, investigations more or less incompatible with these views. . . . . The same principle—vital activity of bacteria—pervades all these phenomena; for the artificial induction of septic diseases has been, in all these experiments, originally accomplished by the incorporation into the animal of *putrid tissues*, with or without bacteria. Now, since putrefaction must be regarded, in the present state of our knowledge, as impossible without the presence of these organisms, it is evident that sepsis, putrid infection, was in every case due, directly or indirectly, to the action of bacteria. Hence we are logically driven by all this work to the belief that septicæmia implies the introduction into the animal either of living bacteria, or of a substance which has acquired noxious properties through previous vital activity of these organisms."

Referring to the researches of Ogston especially, he says, "The mere fact of association does not, of course, necessarily prove a causal relation of the organisms to the suppurative process; but the observation that a zoöglœa mass of micrococci is often the centre of an abscess; that indeed abscess-formation in all stages, from a simple accumulation of straggling leucocytes to the fully developed destructive infiltration of tissue, has been observed around a nucleus consisting of a minute embolus composed entirely of micrococci; that the progressive purulent infiltration of the surrounding tissue is preceded by an invasion of the same by micrococci—can be impartially and satisfactorily explained, in the present state of knowledge, by no other hypothesis than that the micrococci *cause* the suppuration. Experimentally there is direct evidence to the same effect."

At a further stage of the lecture we find the following brief tabulation of the fundamental elements of antiseptic surgery:—"For the accomplishment of such decomposition it is evident that three factors must concur: 1, the presence of animal tissues deprived of vitality, and hence capable of putrefaction; 2, the presence of organisms capable of inducing putrefaction; 3, the prevalence of conditions which permit the vital activity of these organisms. The absence of any one of these conditions renders putrid infection impossible. The prevention of decomposition and consequent septic infection from a wound can therefore be accomplished theoretically in any one of three ways: 1, the exclusion of putrefiable materials, *i.e.*, cleanliness; 2, the exclusion of bacteria; 3, the addition of a substance in whose presence putrefactive bacteria are made inert. It is evident that the accomplishment of any one of these three ends is antiseptic, or, if you prefer on etymological grounds, aseptic surgery. . . . .

"Antiseptic surgery, then, is not comprised in the spray and carbolic acid; it is not simply a question as to the relative antibacterial properties of this, that, and the other so-called antiseptic agents. It is an attempt to prevent the entrance into, as well as the formation within, a wound of all substances, organized and unorganized, which can interfere with cell-nutrition. It comprises, first, the exclusion or removal of all putrefiable materials—blood, pus, necrosed tissue (a point to which the Listerian school seems inclined to ascribe a subordinate place; witness Cheyne's "Antiseptic Surgery"); second, the exclusion of all ferments, bacterial or other; and, since neither of these can always be accomplished, since even under the most perfect Lister or other dressing, both putrefiable materials and bacteria may be present; third, the establishment of conditions incompatible with bacterial development. The most complete antisepsis is evidently not that which sees in bacteria the sum and substance of all surgical evil, but that which recognises and endeavours to avoid *all* possible sources of infection."

Before closing this review, we would like to extract one or two sentences from the fourth of the series of lectures. In this lecture Dr Belfield takes up the subject of the connexion of organisms with various infectious diseases, and the investigations of Pasteur and Koch. He says, "In considering this subject, with which Koch's name is almost as closely associated as Pasteur's, it is advisable again to remember that this is a question of facts and not of individuals; that to us Gaul and Teuton are alike friends, as we fortunately keep no watch on the Rhine; that neither Pasteur's brilliant work on fermentation, nor Koch's services on anthrax and tuberculosis; neither the unreasoning enthusiasm of the French for Pasteur, nor the intelligent confidence of the Germans in Koch; neither the grandiose egotism and artful dodging of the former, nor the apparent personal rancour of the latter;—none of these may obscure our vision in estimating the value of present evidence."

Further on we read, "The virus of an infectious disease must, then, be something capable of reproduction, and this power is the peculiar characteristic of an organism. No unorganized poison, acid, salt, alkaloid, ferment is at present known which is capable of manifesting the phenomena shown by the virus of syphilis, variola, scarlatina, etc. . . . . Again, it is said, How is it possible for recovery to occur from a disease caused by bacteria? What stops their growth? So far as I am aware, this question has not been decisively answered. Several facts suggest that the products of their own vital activity arrest further development."

In referring to the opponents of the germ theory of disease, he says, "There is probably no one among us who doubts that the trichina spiralis can and does induce in the human subject a serious, even fatal disease; yet the evidence as yet adduced is merely the association of the worm with the morbid condition, for no one, so far as I am aware, has ever induced the disease by introduction of the isolated worms. Yet the same men who assert the pathogenetic influence of the trichina contemptuously reject the idea that leprosy, tuberculosis, recurrent fever, and pyæmia are caused by bacteria, although the evidence—constant association of the parasite with the morbid condition—applies to all cases. . . . . Yet it will doubtless be years before some of us realize the fact that in this unreasoning and prejudiced opposition to demonstrated facts, we are playing the unenviable rôle of the cow to the locomotive of advancing science. George Stephenson's prophecy—that the result of such collision would be 'bad for the coo'—has been often fulfilled; neither horned cattle nor pseudo-bacilli have materially retarded the progress of science."

These extracts are taken from a report of the lectures in the *New York Medical Record.*

Voice, Song, and Speech: a Practical Guide for Singers and Speakers, from the Combined View of the Vocal Surgeon and Voice-Trainer. By LENNOX BROWNE, F.R.C.S. Ed., and EMIL BEHNKE. London: Sampson Law, Marston, Searle, & Rivington: 1883.

THE necessity for a good popular work on vocal physiology must be apparent to any one who has taken the trouble to observe the modes and methods of our professional singers, or to study the varied and contradictory recommendations given in many singing manuals. The book before us goes far to supply that want. The idea of combined authorship was a happy one, and the result is good. Our only fear is that it is too elaborate to be sufficiently popular. Here and there, more particularly in the anatomical portion, the technicalities are greater in number than they might be, while the descriptions of some of the difficult-to-be-understood laryngeal muscles are too complicated to be readily intelligible to one who has not seen a dissection of the organ. With these exceptions the book is written so that he who runs may read. The chapter on the hygienic aspect of breathing is one that might be studied with advantage by others than singers and voice-users. It is illustrated with four fine plates, adapted from Flower and Roth, which at a glance tell their own tale. We are glad to observe, in another section, attention drawn to the strange error, promulgated in a recent much-praised work, regarding the mechanism of the *voce mista*, that it was produced by the full, loose vibrations of one vocal cord through its whole thickness, while in the other the vibrations were confined to the fine inner edges. Truly, as our authors remark, " we might as well expect to see a horse galloping on one side and trotting on the other." The last two sections, on the daily life and the ailments of the voice-user, contain much good advice, without giving that little knowledge (more particularly of medicines and prescriptions) which is dangerous. A novel feature in the work is the splendid series of photographs of the larynx and soft palate, the best and most distinct that have yet been made. Both Mr Browne and Mr Behnke are to be congratulated on the success that has at last attended their efforts in this direction. A word of praise is also due to the publishers for the handsome style in which the book has been brought out.

Malignant Disease of the Larynx. By HENRY T. BUTLIN, F.R.C.S., Assistant Surgeon and Demonstrator of Diseases of the Larynx, St Bartholomew's Hospital. London: J. & A. Churchill.

THE author of this monograph is already well known as the writer of a work on sarcoma and carcinoma, and he offers the present essay as a further contribution to the local study of malignant tumours. The great principle underlying his present and previous work is, *that the mother tissue largely influences the degree and kind of malignancy presented by a tumour.* Cases only are described or quoted in which a microscopical examination has been made, which necessarily limits their number.

The work bears traces of careful study, so far as the minute anatomy of the growth is concerned; indeed, this part of the book is its strongest point, and shows the author to be an accomplished histologist. We are struck with the author's confession of the doubt which sometimes enshrouds a sarcoma of the larynx, even after microscopical examination. A case recently under our own care, in which careful examination of the affected parts by several able microscopists led to a divergence of opinion as to its precise nature, confirms this expression of doubt, and seems to show that even with the aid of the microscope we cannot always define with accuracy the character of an obscure laryngeal growth. But, at the same time, we are at one with the author in considering this as the most satisfactory method of arriving at a diagnosis in such cases, by removing a small portion of the growth, and submitting it to microscopical tests.

The clinical or symptomatic portion of the work is inferior to the anatomical part. The absence of glandular affections in some cases of undoubted malignant disease of the larynx is dwelt upon, and, in the case of sarcomatous, and probably also of carcinomatous disease, is ingeniously explained by the author as probably owing to the neoplasm diminishing the calibre of, and subseqnently obliterating, the lymphatic capillaries of the part, and thus rendering them incapable of transmitting the infecting material of the tumour. We doubt the correctness of this hypothesis, while, at the same time, we cannot advance any more plausible explanation of what is an undoubted fact. We are not inclined to attach the same weight as the author to the presence of radiating pains in the ear as affording a presumption in favour of cancer, and "as being very seldom noted in other affections of the larynx," for we have undoubted clinical evidence to the contrary. On the other hand, we have lately seen on several occasions a case of malignant disease of the larynx, with ulceration, in which the ear symptoms were almost entirely absent.

In regard to treatment, the author considers partial or complete resection of the larynx as a justifiable operation in sarcomatous disease—less so in carcinoma, particularly the extrinsic variety. Tracheotomy is beneficial in both varieties, while thyrotomy and laryngotomy are seldom of much use. The value of morphia insufflations in assuaging pain is also noted. We think the author has made an important omission in failing to call attention to the probable syphilitic nature of such as the above; for, in the words of Morell Mackenzie, "in no case should the patient be condemned as suffering from cancer until all doubts have been cleared up by the trial of antisyphilitic treatment."

We think Mr Butlin has prepared a work of considerable value alike to the specialist and the general practitioner; and with a more extended clinical experience of these diseases, as also of the other affections of the larynx which occasionally they so closely mimic, we have little doubt that much good work in this department may yet be expected of him.

The Antipyretic Treatment of Typhoid Fever. By G. C. SMYTHE, A.M., M.D., Professor of Principles and Practice of Medicine, Indianapolis, Ind.

THIS paper was read before the Medical Society of the Mississippi Valley at Indianapolis on 19th September 1883, and has been issued in pamphlet form, reprinted from the *Cincinnati Lancet and Clinic* of 6th October last year.

He begins his lecture by briefly passing in review the pathology of enteric fever, the antipyretic treatment of the same, and in a few words points out the value in this fever of carefully recording the temperature, and reducing it, when above 103° F. in the axilla, by means of cold water or quinine, or both. He has tried Dr Currie's method by cold affusion, Liebermeister's by plunging into cold water of 60°, and Von Ziemssen's graduated bath, beginning at 90° and cooling to 60°. Of these three methods of abstracting heat he prefers the last, as being the most agreeable to the feelings of the patient, while at the same time it is equally efficacious in bringing about the desired result.

However, as this treatment is objected to by many patients, especially when it has to be repeated daily or oftener for weeks, he recommends the cold bath in the early stage of the disease, continuing the antipyretic treatment thereafter by means of quinine. Dr Smythe is in the habit of presaging the antipyretic treatment with two or three cathartic doses of calomel, but only before the typhoid condition becomes developed.

In some cases, where both baths and quinine have little effect in producing well-marked remissions, he has found digitalis or veratria, given for twenty-four or thirty-six hours preceding the administration of the quinine, followed by satisfactory results. To get the full benefit of quinine, he says, it should be given in the early evening, and in one full dose of 25 to 50 grs. Quinine given in this way does not require to be given so often, nor does it produce the unpleasant effects so often seen to follow the administration of small doses continued for several days. No harm has ever been known to result from its use in this way.

Typhoid Fever in Victoria. By JAMES W. BARRETT, M.B., Ch.B., Resident Medical Officer to the Melbourne Hospital. Melbourne: George Robertson: 1883.

THE part before us is the first section of a work on typhoid fever which the author hopes to complete as soon as possible.

Dr Barrett informs us in his introduction that he believes the work is the first production of a medical graduate of the Melbourne University. In this section, which is chiefly statistical, he points out its prevalence throughout the colony, and suggests for its extinction the disuse of cesspits, the thorough disinfection of the excreta, and an efficient drainage system, which should be systematically flushed during the typhoid season.

By means of tables and charts he shows the seasonal prevalence, susceptive ages, course of temperature, mortality, etc., all of which go to prove that typhoid fever in Victoria is similar to typhoid fever at home.

The first section is of little importance to the physician here, as the two points on which we require more light, etiology and treatment, are not touched upon. But the book will undoubtedly be of great value to the Victorian physician, both for its statistics and suggestions.

A History of Tuberculosis from the Time of Sylvius to the Present Day; being in part a Translation, with Notes and Additions, from the German of Dr Arnold Spina: containing also an Account of the Researches and Discoveries of Dr Robert Koch and other recent Investigators. By ERIC E. SATTLER, M.D. Cincinnati: Robert Clarke & Co.: 1883.

SINCE the announcement in 1882 of Dr Koch's discovery of the bacillus tuberculosis, few journals have been issued without containing an article, leader, or leaderette, more or less formal or formidable, on this active and destructive little germ. Some of the best of these have been laid under contribution for the compilation of this book. It contains little or no original matter. Five out of its seven chapters are confessedly a free translation of a portion of Spina's *Studien über Tuberculose.* The last two are a *résumé* of Koch's investigations and of the subsequent experiments made by those who endeavoured to confirm or upset his conclusions. It will thus be seen that Dr Sattler's volume is a fairly good history of the recent progress made in the investigation of tubercle.

The Pathology and Treatment of Venereal Diseases. By Drs BUMSTEAD and TAYLOR. London: Henry Kimpton: 1883.

ON former occasions we have welcomed the several editions of this admirable work; and it is now our very pleasant duty to recommend most highly this the fifth edition, revised and rewritten, with many additions, by Dr Taylor.

In the preface the author deplores in very feeling language the loss the profession has sustained by the death of his former collaborator, Dr Bumstead.

As an addition to the illustrations are two pages of chromolithographic drawings, delineating the chief venereal lesions in a most accurate manner.

In the chapter on treatment a new adjuvant to the mercurial course is recommended "as one of the most valuable agents at our command." It consists of the fluid extract of erythroxylon coca, prescribed as follows:—

R Fl. ext. erythroxylon coca, . . ℥ij.
Tinct. cinch. co.,
Tinct. gent. co., āā . . . ℥j.
M.

Dose.—Two teaspoonfuls in a wine-glass of water three times a day, an hour after meals.

A chapter on syphilis and marriage has been appended, giving the best advice on this important question.

The Pedigree of Disease: being Six Lectures on Temperament, Idiosyncrasy, and Diathesis, delivered in the Theatre of the Royal College of Surgeons in the Session of 1881. By JONATHAN HUTCHINSON, F.R.S. London: J. & A. Churchill: 1884. Pp. 142.

EVERY thoughtful physician and surgeon will feel grateful for the opportunity now afforded him of having these admirable lectures in a compact, connected form. No one has a better right than Mr Hutchinson to write on this subject. His wide reading, his enormous experience as a surgeon, an ophthalmologist, and a syphilologist, his marvellous industry, his powers of philosophical generalization, and, not least, his early studies under the late Professor Laycock, all unite to give his opinions and theories on such subjects great weight and authority. The lectures are carefully written, well expressed, here and there with an epigrammatic smartness. "Idiosyncrasy is individuality run mad" (p. 24). Even the headlines are instructive and witty. "*Beati possidentes*" we find as a headline to a page containing the following sentence:—"When the elephantoid process has once well set in, I believe it is never wholly cured; and no better instance could be produced of the pathological advantages of possession. The worse the disease is, the worse it is likely to become" (pp. 103–4).

A Compend of Surgery. By ORVILLE HORWITZ, B.S., M.D. London: Henry Kimpton: 1883.

THOUGH this book is published in London, it has internal evidence of having been written in America. It forms one of a very large number of works which profess to give students all they require to know in the smallest possible compass. We need hardly say that the result is unsatisfactory. Perhaps this book has not so many faults and errors as many we have examined, but it is far from perfect. We cannot imagine any real use for such a book, for the reader would require to have already a competent knowledge of surgery to enable him to avoid being misled by the errors.

Surgical Notes. By J. CRAWFORD RENTON, M.D., Surgeon to the Dispensary of the Western Infirmary, Glasgow. Reprint from *Glasgow Medical Journal*, September 1883.

THE "Notes" would be better entitled "Reports." Several most interesting cases are reported — removal of fibroid of uterus, amputation of thigh for osteomyelitis, removal of cancer of rectum, operation for rupture of the perineum into the rectum, and tracheotomy for œdema glottidis. All except the last were successful. Dr Renton demonstrates great ability in the surgical treatment of a great variety of affections. In one part of his pamphlet he recommends the employment of the Dublin inhaler for the administration of chloroform or any other anæsthetic.

Annals of Anatomy and Surgery. Brooklyn, N.Y.: 1883.

The November number thoroughly maintains the high character of this excellent periodical. There are three surgical papers, and one anatomical, all of special interest and value. Dr Oscar H. Allis writes on the descent of the testicle. He gives a somewhat new description of the gubernaculum testis. He describes it as a distinct structure attached to the scrotum below and the testicle above, without any other attachment, covered with peritoneum, especially on the inner side, and influencing the descent of the testicle and invagination of the tunica vaginalis in the following way:—Suppose the gubernaculum does not grow after a certain age of the fœtus, the other parts growing, the relation of that structure to them will be constantly altering, the gubernaculum becoming relatively shorter, and the testicle consequently relatively nearer the scrotum. Suppose the gubernaculum to atrophy, the dragging down of the testicle will be so much the more rapid and complete. Again, suppose the gubernaculum, at a certain period, covered to half its length with peritoneum, as it becomes relatively shorter the peritoneum is drawn into the inguinal canal, and ultimately completely invaginated when the testicle becomes adherent to the lower part of the scrotum. Thus it is seen that the peritoneum precedes the testicle in its descent, instead of the latter pushing it and other structures before it, as is sometimes taught. Dr Allis illustrates the paper with several diagrams which are well drawn and very clear. We do not think Dr Allis's demonstration explains everything. For instance, no notice is taken of the part played by the spermatic cord in the movements described above. Dr Allis, in the latter part of his paper, demonstrates very well the relation of congenital hernia to the descent of the testicle. On this subject he has also got some well-executed diagrams. One in particular shows very well how hydrocele of the cord may be produced. He has also an ingenious theory for explaining how the descent of a portion of bowel in hernia may occur from temporary elongation of the mesentery when the bowel is empty and contracted. He considers that a distended condition of the bowel shortens, while a contracted condition lengthens the mesentery, and so makes the bowel more capable of being protruded as a hernia.

The second article is by Dr Lewis A. Stimson of New York, on "Compound Articular Fractures." The article is well written, but fails in one point. It is evident that the author does not understand antiseptic surgery. He describes three cases of fracture, implicating respectively the elbow, the knee, and the ankle. Two out of the three suppurated, and the patients escaped with tolerably useful limbs by great good luck. None were treated in thorough Listerian fashion, the ankle case least of all, and yet it did best. Dr Stimson is at a loss to explain this. We have no difficulty in doing so from his own account of the case, which is as follows:—"The left fibula was broken at a point about three inches above the tip of its malleolus; the internal malleolus was broken off at its base, and this fracture communicated with a transverse wound of the skin directly over it, through which blood was flowing quite freely. A small piece of bone which lay in the wound was removed. The surface of the wound was washed with the carbolic solution, but the wound was not injected. A gauze dressing was applied, with side splints outside. The next day the dressing, which was saturated with blood, was changed. . . . . On the third day the dressings were again changed, the position of the foot corrected, a posterior and an external lateral splint of plaster of Paris applied next the skin, and a new dressing placed over all. This dressing remained in place until February 26, the tenth day, when the discharge came through. During the first days the temperature did not rise above 99°; on the eighth day it rose to 99°·5, and on the tenth to 100°. . . . . *March* 5.—The wound was found to be reduced to a small flat sore, and a small cotton dressing was substituted for the gauze. *March* 18.—The wound was found entirely healed; a continuous plaster splint was applied from the toes to the knee, and the patient was discharged March 24, at his request. *May* 7.—I learned that the joint was freely movable and painless; the patient had returned to work, and was troubled only by the swelling of the limb during the day." The explanation is simply this—a comparatively small wound, not communicating with the joint directly, but with the fracture of the internal malleolus; secondly, blood flowing freely at the time of admission and for several hours after. With this external flow of blood it would be difficult for sepsis to find its way in. There is a rule among the surgeons of the Infirmary here not to inject a wound that is freely bleeding, for the blood is washing it out. From the history of Dr Stimson's ankle case it is quite evident that, thanks to the free bleeding and gauze covering (which does not dam back discharge), the deep parts of the wound healed at once, and the wound became virtually a superficial one. With regard to the other two cases, Dr Stimson wonders how the injecting of the joints which he performed did not benefit the condition of the wounds more and prevent them becoming septic, as they evidently did. We would suggest to him that there may be various ways of injecting a joint or a wound. In using a common syringe the fluid is driven forcibly *inwards* and flows comparatively feebly *outwards;* whereas using a catheter passed down to the furthest part of the wound provides a direction of current that is *wholly outwards*. We would ask Dr Stimson whether the latter method is not likely to be much more successful than the former in making a wound or joint aseptic, and whether the former method might not in some instances be apt to drive septic matter in rather than out, and so do more harm than good.

The third article is on abscess of the liver successfully treated, by Dr H. Banga of Chicago, by free incision. The fourth article is on a case of cysts connected with a hernial sac, reported by Dr T. F. Prewitt of St Louis. The cysts seem to have been somewhat of the character of hydatids. The larger cyst was about the size of a hen's egg, and was attached to the inner surface of the peritoneum forming the sac of the hernia (which had been operated on for strangulation). Two smaller cysts were attached to the neck of the larger one, and communicated with its cavity. The contents were not examined.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIII.—MEETING IV.

Wednesday, 6th February 1884.—Dr Littlejohn, *President, in the Chair.*

I. Exhibition of Patients.

1. *Dr Hodsdon* showed a middle-aged man suffering from PARAFFIN ECZEMA, under the care of Dr Duncan, to whom he had been sent by Dr Longmuir of Bathgate. The disease affected both forearms. It seemed to have begun as comedos on the back of the hands. These, gradually enlarging, went on to the formation of horns, as seen on the dorsal surface of the forearms. The horns falling off left a deep ulceration.

Mr Joseph Bell said this case was an addition to the list of paraffin diseases, in which he was much interested. Paraffin acne and epithelioma were not very uncommon among paraffin workers. He had operated on several cases of the latter disease.

2. *Dr Allan Jamieson* showed a young man who presented either a curious condition of a common disease or a combination of two diseases. Three weeks previously he had observed some spots on the chest, which had since spread gradually. When first seen, Dr Jamieson thought the case was one of lichen marginatus, but a microscopic examination of some scrapings showed that these contained the parasite of pityriasis versicolor. The patient also showed a certain amount of psoriasis, best marked below the knees. The question was whether this was simply a development

of psoriasis commencing on the back and raising up the epidermis affected by pityriasis versicolor, or whether it was that rare kind of pityriasis versicolor which assumes the circinate form.

II. EXHIBITION OF PATHOLOGICAL SPECIMENS.

Dr Church showed the SUPRA-RENAL CAPSULES and KIDNEYS from his case of Addison's disease.

III. ORIGINAL COMMUNICATIONS.

1. *Dr Craig* read his paper on a CASE OF MALFORMATION IN A MALE CHILD, IN WHICH THE RECTUM ENDED IN THE MEMBRANOUS PORTION OF THE URETHRA, AND THE FÆCES WERE PASSED THROUGH THE PENIS, which appears at page 800 of this Journal.

The President said the Society was much indebted to Dr Craig for his communication. They would like to hear the remarks of the surgeon who was connected with the case, and he would therefore call on

Mr Joseph Bell, who pointed out that the admirable description of the case by Dr Craig left him very little to say upon it. He had had some experience of operating for such conditions, more particularly in two classes of cases—first, where the rectum communicated with the vagina in the female child, and secondly, where there was no such communication, the rectum ending in a blind *cul-de-sac.* Operation in the first class of cases was not excessively difficult, and almost uniformly successful. By passing a large doubly-curved bougie into the vagina, then through the opening into the rectal *cul-de-sac,* and pressing the latter downwards, it was generally easy enough to expose the mucous membrane by a careful dissection, open it freely, and stitch the edges to the skin edges made by the cut in the region where the anus ought to be. Much care was, however, required for a long time afterwards to prevent the artificial anus closing. The second class of cases was much more difficult to deal with. Though the operation might be successful so far as reaching the bowel and opening it were concerned, the children themselves did not do well. They rarely reached maturity. They were often badly formed otherwise. His experience was that these malformations were more common in female than in male children. In Dr Craig's case, which was almost unique, he had felt that the want of bulging of the bowel from the absence of meconium made the operation much more difficult. They had no indication where the bowel was; and though at his second examination he had prolonged his incision, making it deeper, he had not felt warranted in going further. Colotomy was considered, but the child was very feeble, and the parents were against further interference, preferring that it should die than come to maturity with such a deformity.

Professor Simpson expressed the pleasure with which he had listened to Dr Craig's communication. The subject was interesting from its rarity. Mr Bell had rightly stated that these malformations and malformations generally were more common in the female than in the male. He thought Dr Craig's criticism of the jaunty description given by Mr Holmes of operation in such cases was very fair. It must be borne in mind that the organs in the child were not so easily got at as in the adult. In the new-born infant the bladder was not a pelvic organ, and the rectum and bladder in a case of this nature would be at the brim of the pelvis. In this particular case there was also another difficulty, of which Mr Bell had so far reminded them. There was no bulging of the bowel to help to guide the surgeon, as the matter was escaping by the urethra. Most of these children were unsatisfactory from the circumstance that such a malformation was rarely found alone. There was usually some other deficiency, either in the skeleton or the viscera. Several examples of this would be found in works on teratology, such as those of Vrolik, Förster, and Ahlfeld, which he would recommend Dr Craig to consult.

Mr Maxwell Ross said that Dr Craig had kindly asked him to supplement his communication with some additional notes from the literature of this subject. Mr Harrison Cripps had published an exhaustive paper in the *St Bartholomew's Hospital Reports* for 1882, on "Imperforate Rectum and Anus in Children," with a list of one hundred cases collected from different sources. Of these hundred, twenty-five were cases in which the bowel communicated with some part of the genito-urinary tract. Contrary to the experience of Mr Bell and Professor Simpson, the majority, thirteen, occurred in male children. In the twelve female children the communication was with the vagina. Of the thirteen males, nine appeared to have died shortly after birth, two lived over a year, and two were alive when their cases were reported, at the respective ages of three and twelve. In five of the nine cases which died early, the bowel communicated, it is said, with the prostate (prostatic urethra ?). In the other four the communication was directly with the bladder. Of the two which lived a year, one was a case reported in the *N. Y. Med. Rec.* by Dr Post. An artificial anus had been made, but closed. The patient lived apparently in good health for a year, though passing fæces by the urethra. A free communication between the rectum and prostate was found at the autopsy. The other case was under the care of Dr Hilles, and was recorded in the *Austral. Med. Journ.* Operation had failed to reach the bowel. The infant continued to pass his fæces through the penis, and was stated to have lived on milk, and to have thriven well. At the end of the year, stoppage having occurred, he was cut as if for stone, and a quantity of inspissated fæces removed from the bladder. He did well for a month, but died of diphtheritic ulceration of the wound. In the remaining two cases operation was successful, and the patients alive at the time of reporting. In both the urine was tinged with meconium at birth. One was operated on by Dr Thorn of Toledo in 1869. Twelve years later the patient was in good health, and the artificial anus doing its duty. The second case occurred in the hospital practice of Mr Howard Marsh. The anus showed a tendency to contract long after operation. It was forcibly dilated when the child was three years old. In Dr Craig's case it was evident that the anal tube, or third part of the rectum, had not developed, and that the septum between the bowel and genito-urinary tract had not completely formed. It was interesting to note that in two of the cases collected by Mr Cripps (one published by Tarnier in the *Bull. Soc. Chir. Paris* for 1873, the other in the same journal for 1875, by Polaillon) the other end of the alimentary canal, as well as the rectal portion, was incompletely developed. In Tarnier's case there was a fissure between the œsophagus and the trachea. The child died of asphyxia. In Polaillon's the œsophagus ended in a *cul-de-sac*, the trachea communicating with the stomach. Mr Cripps's opinion regarding the treatment of these malformations agreed with the opinions expressed by Mr Holmes and Mr Bell, that they were very unsatisfactory and but little amenable to surgical interference.

Dr Craig thanked the Society for the kind manner in which his paper had been received. He was of opinion that success or the want of it in the treatment of such malformations depended greatly on the extent to which the rectum was developed. Had the third part of the rectum been developed in his case, he had no doubt that Mr Bell would have succeeded in his operation. This was a point very often lost sight of in recording these cases.

2. *Dr Affleck* read his paper entitled CLINICAL OBSERVATIONS ON A CASE OF PERFORATING GASTRIC ULCER, which will appear in a future number of this Journal.

The President remarked that this was a most interesting case, and the clinical observations of Dr Affleck were exceedingly *apropos.* The patient, who was in the police force, was well known to him, but had never applied for medical advice. When he saw him lying on the table in the pathological theatre he was very much struck with his splendid physical development, presenting a very striking contrast to the leuco-phlegmatic appearance of the women who so often suffered from this disease. He was sure the Society would be pleased to hear further remarks on the case.

Dr Shand considered that it was his moral duty, as an old country practitioner, to give information when he could. He accordingly gave details of two cases of sudden death from perforation of a gastric ulcer occurring in women, one aged 45, the other 30. The first of these told him, some time before her last illness, that she had got more good from the old *pil. ferri co.* of the London Pharmacopœia than from any other remedy.

Dr Byrom Bramwell said that Dr Affleck had so ably brought before them the particulars of this case that he had left very little to be said. There was, however, one point to which he thought attention might be drawn, viz., the medico-legal interest of such cases. When people died suddenly, as this man had done, the idea of irritant poisoning was very apt to occur. He had once been called upon to examine the body of a servant girl in Newcastle who died within twelve hours from the commencement of the symptoms. The coroner had been communicated with, under the idea that the girl had been poisoned. The body was extremely well nourished, and, so far as could be ascertained, the patient had not complained of any stomach symptoms before the onset of the attack, which commenced with acute pain in the region of the stomach, and vomiting. The post-mortem showed ulceration at the pyloric end of the stomach. It was very difficult, in cases of sudden acute peritonitis suddenly arising in perfectly healthy persons, to come to a conclusion as to the exact pathological cause of the symptoms. In addition to a perforating ulcer of the stomach, which was certainly the most common cause of this sudden acute peritonitis, the rupture of a hydatid cyst, or of an abscess which had been latent for some time, were, in his experience, the next most common causes in men. As Dr Affleck had pointed out, a sudden volvulus, which sometimes causes a similar condition, was more easily diagnosed. In women the rupture of an extra-uterine cyst was a not unfrequent cause of immediate peritonitis, and was sometimes mistaken for irritant poisoning. He had a specimen of this kind from the body of a young lady who had been dancing at a ball, and, after partaking of some refreshment, was seized with acute pain in the abdomen, vomiting, and diarrhœa. She died in a few hours of acute peritonitis. On opening the abdomen the case was seen to be one of extra-uterine cyst, a Fallopian gestation about three months, which had ruptured into the peritoneum.

Dr Carmichael was also interested in the medico-legal aspect of these cases. Many years ago he had met with a case of very sudden death in a young married woman who was on unfriendly relations with her husband. The post-mortem showed similar appearances to those described by Dr Affleck, the ulcer being on the posterior surface of the stomach, but nearer to the pyloric end. The patient had apparently been in perfect health, not having required any medical treatment previously. The procurator-fiscal asked him to send in a report, and after the post-mortem examination he had no difficulty in giving it as his opinion that the patient died from natural causes.

Professor Simpson said that as Dr Bramwell was giving a category of the more common causes, in his experience, of attacks of sudden acute peritonitis, his mind was recalling instances of torsion of an ovarian tumour, bursting of an ovarian cyst, of a cancerous uterus, and of a pelvic abscess, as causing the same condition. Last summer he saw in Fife a lady under the care of two medical men, who thought she was dying of an escape of the contents from some portion of the gastro-intestinal canal into the peritoneum. On the morning of the day he was sent for, she was suddenly seized with severe pain, followed by collapse. The practitioners—in whose minds the case of a young man in the neighbourhood who had died shortly before of perforation of a gastric ulcer was uppermost—thought that the lady was suffering from the same lesion. On a little careful inquiry the Professor came to the conclusion that there might have been conception, because he found out that for two months there had been amenorrhœa. The prognosis varied according to the diagnosis. Was the idea of a perforation right, the case was hopeless. Had they to do with a burst extra-uterine sac, there was some faint hope of recovery. A pelvic examination showed that blood was filling the pelvic cavity, but that might be from some abdominal lesion. All the same the impression he got from the examination was that it was a case of extra-uterine gestation. The patient ultimately rallied, and was now well. He had had no opportunity since of confirming his diagnosis, but he had no doubt it was the correct one. One point in the case had not been touched on, the question of surgical interference, on which he should like to have Mr Bell's opinion. It was a grave question whether a patient with a thready pulse should be subjected to such an operation as opening the abdomen; but one gathered from the notes of Dr Affleck's interesting case that, had a surgeon been present and opened the abdomen, he might have found the conditions observed at the post-mortem and perhaps repaired them.

Mr Bell said he could not help feeling that if he were in this young man's position he should like to have an operation tried, a laparotomy to find out and put right, if possible, the cause of the symptoms. The operation was possible. It had been done in a few cases, and in one or two had been successful. The case reminded him of one that had been brought before the Society by his father and the late Dr Warburton Begbie. It was that of a young gentleman who had been running in the game of hare and hounds over the Pentlands, and had reached Roslin, where, with one or two others, he sat down in the inn to a dinner of roast-beef and mustard, with potatoes, and a small glass of beer. He then went out on the bridge, felt a sudden pain in the abdomen, and had to be carried home to Merchiston Castle. The post-mortem showed that a perforation of the stomach had occurred, and pieces of roast-beef were found in the peritoneal cavity. He was a young man of very fine physique, and had never before shown symptoms of a gastric ulcer.

Dr Affleck said surgical interference in this case was out of the question. The patient was in a state of utter collapse, and could not have borne an operation of such gravity. The medico-legal aspect of the case was before his mind, though he had not referred to it. Indeed, he thought, when he saw the case in his ward (VI.), which was reserved for patients suffering from acute nervous maladies, poisoning, etc., that it had been put there under the supposition that it was a case of irritant poisoning.

3. *Dr H. M. Church* read his NOTES ON A CASE OF ADDISON'S DISEASE AT AN UNUSUALLY EARLY AGE, which will appear in a future number of this Journal.

The President asked if the child had sustained any injury.

Dr Church replied that there was no history of that.

Dr Webster thought the size of the supra-renal capsules in this case very remarkable. The bronzing of the mucous membranes was exceedingly marked. The larynx, which he had abstracted, was as much bronzed as the skin itself.

Dr Byrom Bramwell asked if the condition of the nerves in the neighbourhood of the capsules had been noted. This was a most important point, because it had been shown that the branches of the sympathetic nerve ramifying over and round the capsules were inflamed, thickened, and enlarged in this disease. It was a curious fact that only tubercular disease of the capsules produced this bronzing. Large tumours of the gland were sometimes met with, but they did not cause bronzing or discoloration of the skin. Dr Bramwell had repeatedly seen both capsules completely destroyed by cancer, two cases of this description having come under his observation within the past year, without any bronzing. The mere destruction of the capsules did not, therefore, produce the condition. It was an important and interesting question why they got bronzing in tubercular disease only. One would suppose that a cancerous change would set up as much irritation as a tubercular. Unless we believed that the irritation was much more intense, or that there was a specific irritation of the nerves by the tubercular matter, it was difficult to understand. They sometimes got bronzing in cases of phthisis in which the capsules were not affected at all. He had known cases mistaken for Addison's disease in which there were tubercular disease of the lung and bronzing of the skin. It might be a question whether the tubercle bacillus or some other product of the condition did not act as a special form of irritant to the branches of the sympathetic, and so lead to the bronzing.

Dr Church regretted that the nerves had not been examined. There was no adhesion of the capsules to the surrounding structures, except on the left side, where the capsule was adherent to the kidney.

The following was inadvertently omitted from the proceedings of the third meeting, reported in the Journal for February:—

IV. EXHIBITION OF INSTRUMENTS.

Mr Macdonald Brown exhibited TWO CLAMPS FOR ENTERECTOMY, one designed and used by Mr Treves of the London Hospital, the other by Mr Bishop of Manchester. Having demonstrated the method of application of both instruments, he stated that Bishop's clamp was a modification of Treves's, and that the advantages claimed for it by its inventor were—that it was more easily and expeditiously applied; entailed less meddling with the mesenteric attachment of the bowel; and, lastly, that it allowed the operator to test carefully the results of the operation, as regards patency of the gut, etc., after the divided ends of the intestine had been sutured together.

Dr M'Bride read a paper on a RARE FORM OF LARYNGEAL NEUROSIS, which appears at page 790 of this Journal.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLV.—MEETING III.

Wednesday, 9th January 1884.—Professor SIMPSON *in the Chair.*

I. *Dr Barbour* showed PREPARATIONS AND PHOTOGRAPHS OF KYPHOTIC AND KYPHO-SCOLIOTIC PELVES. This series showed that the increase in the conjugate of the brim was a constant factor, and bore a definite relation to the seat of the kyphosis. The contraction in the transverse diameter of the outlet was not always present, and was not related in its development to the situation of the kyphosis. The unilateral contraction in kypho-scoliosis was not always in the same side as the lumbar curve, but on that side on which the greater weight of the trunk fell.

II. *Dr Milne Murray* showed for Dr Haig Brodie of Farnham the HEART OF A CHILD, with perforate septum ventriculorum. The child had been born at the eighth month, and was somewhat feeble, but lived till the fifth day, when it suddenly expired in the nurse's arms, without any struggle.

III. *Mr R. W. Felkin* read his paper entitled NOTES ON PARTURITION IN CENTRAL AFRICA, which will appear in a future number of this Journal.

Professor Simpson, in the name of the Society, thanked Mr Felkin for his paper, which he said would form one of the most important contributions to the Transactions which had been made for a long time. The paper contained many points of great interest, and would enrich the literature of the subject, which had been laboriously studied by such men as Ploss, Engelmann, and others. Observations such as those just described would have been of the very highest value to these writers. It was very interesting to note that many of the customs described were evidently indigenous, while others, such as the employment of fumigations to relax the passages, were probably derived from the Arab physicians, who had given elaborate instructions as to their employment in certain cases, as well as directions for the selection of the special herbs to be used in different circumstances. The application of bandages seemed very sensible, and their use had been recommended from time to time as increasing the energy of and stimulating expulsive efforts. One of the bandages described reminded us of that suggested by Dr Protheroe Smith. Moreover, some of the positions described favoured in a high degree the efficiency of the accessory powers of parturition. The account of the mode of dividing the cord was also very interesting. The accidents and difficulties described as so frequently occurring amongst such primitive peoples proved that labour among the black races was not the safe and easy process it was sometimes supposed to be, and seemed to him to be a further argument for the necessity of skilled assistance being always at hand under all circumstances of labour. He had in his possession a small cupping-horn which had been in use thirty or forty years ago in Shetland, precisely similar to that brought by Mr Felkin from the interior of Africa. The only difference was that the Shetlanders used the horn of a cow or a sheep instead of the horn of a rhinoceros.

Dr Craig asked whether Mr Felkin could give any account of the species of the herbs employed in the fumigations.

Dr Halliday Croom felt much interested in the successful case of gastrotomy recorded. He would like to know whether the operator dilated the os uteri and compressed the uterus in the abdomen.

Mr Bonnar read the following extract from a letter received from Dr Bonnar, who is in practice in South Africa:—"It is very seldom that a white man has an opportunity of being present at a labour case amongst the Kafirs, and I have often wondered how the stages of labour, especially the third, were managed by the native nurses—for they have women set apart for that business. One day I was requested by the magistrate of Umvoti county to go and see a native woman who had been four days in labour. She was a primipara, young, plump, and healthy. Presentation was natural, and expulsive efforts strong, but the head was caught at the outlet, and I had to deliver by short forceps. I waited to see how the rest of the affair was to be managed. In a few minutes the patient was caught by the nurse by the armpits and wheeled into the centre of the hut, and made to sit half upright, with her legs apart and stretched out before her, her back being propped up by leaning against the centre-pole of the hut. The nurse then placed herself behind her, doubled up her fists, and, encircling the patient with her arms, she dug her clenched fists with all her might deep into the patient's hypogastrium, then, with all her weight, slowly and regularly made her fists swoop down to the symphysis pubis, and on the third repetition of the process the placenta came forth. No hæmorrhage, and no further trouble taken. The woman was about next day."

Dr Arnott had seen the dances referred to at Zulla, in Abyssinia, and these had always a lascivious or sexual meaning. Syphilis was very prevalent in many Abyssinian districts, and he had seen a native princess carried into camp at Antalo to be treated for this disease. He had heard of young girls with their genitals sewn up, as described by his brother-officer Dr Blanc, one of the prisoners, and it was the custom for the husband, on the nuptial night, to cut an opening with a sharp ring provided for the purpose if natural means were insufficient. Many of the Indian customs are quite similar to those described by Mr Felkin, and many of them are derived from religious or sanitary laws. Thus a Parsee woman, when menstruating, is only permitted to sit on stone or iron, and never on wood, the last being more difficult to cleanse. When a Parsee woman went into labour, and was attended by the native women, the latter arranged a semicircle of stones fitted together against one side of the room, within which an iron bed was placed for the mother and another for the child, and no one but the midwife was permitted to go inside the semicircle. The patient remained here for forty days, and then had a bath and resumed her ordinary duties. In native practice there was much need for educated midwives. Lately he had read a case in which a magician was called in to attend a woman in a lingering labour, and he commenced by beating her with sticks on the abdomen for the purpose of "expelling the devil." This is a common superstition. The natives employ strong stimulating remedies, such as pepper, in the treatment of inertia. These they introduce into the vagina. Similar applications are employed to excite menstruation, and he once found some copper coins in the vagina. Again, the midwives often employ great force, and it is not uncommon for them to pull the body away from the head, leaving the latter in utero, in footling cases. The cupping horn is largely employed in India, and the plantain leaf is a favourite dressing. Curiously, the castor-oil leaf is used in India to stop the secretion of milk, not to promote it. The natives are very much afraid of the influence of the wind on women in labour, and on this account carefully close all the windows and doors of the lying-in room. This may have arisen from the dread of tetanus, which is very common at certain seasons, and which they associate with the wind.

Dr William Taylor rose to propose a hearty vote of thanks to Mr Felkin for his kindness in bringing this subject before the Society, and for the elaborate and able way in which he had done it. He had listened with great pleasure to Mr Felkin's paper. He regarded it as highly instructive, not only on its own merits, but also as having given rise to a valuable discussion. He himself was especially interested in the description of drainage employed in the Cæsarean operation. He had been much impressed with the care taken to avoid risk from menstruation. He himself believed that he could trace certain cases of puerperal fever to want of proper cleanliness on the part of the nurse, who happened to be menstruating at the time. The laws relating to polygamy were also very remarkable, and not less so the definite way in which they seem to be carried out.

Mr Felkin, replying to Dr Craig, said that specimens of all the plants mentioned in his paper as employed in the medical practice of the various tribes had been collected, but that, unfortunately, they had been accidentally damaged to such an extent as to render them useless for examination and classification. In reply to Dr

Croom, he stated that the operator had first dilated the os from within the uterus, then removed the clots and placenta. He then compressed the uterus in the abdomen until it had firmly contracted, and had emptied the abdomen of what fluid had escaped by turning the patient into a semi-prone position on the edge of the couch. In conclusion, he thanked the Society for the way in which they had received his paper.

Dr James Arnott and Dr Thomas Proudfoot were admitted Fellows of the Society.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

Euphorbia pilulifera in Asthma.—The following cases are reported rather with a view to supply evidence in support of the fact that Euphorbia pilulifera is a drug worthy of a trial in asthma than to permanently fix it as a remedy *par excellence* in this affection. The remedy is still too new to entitle it to this distinction regardless of its merits. I am now using Euphorbia pilulifera in two cases:—Mr A., about 60 years old. The day I prescribed for him he said he was suffering more than he ever had with the asthma, although he had been afflicted with it for fifteen years. The relief afforded by euphorbia was prompt. I have seen him once or twice since, and relief continues, although he is afraid it will prove to be only temporary, as with all other remedies. His faith in drugs, it will be seen, is not strong. Mrs E., aged 40, has a complication of asthma and bronchitis of some ten years' standing. She was promptly and materially benefited, but she has not used it long enough to know whether it will prove of lasting benefit. I have been prescribing it with simple syrup thus:—

℞ Euphorbiæ pilul., . ℥j.
Syrupi simplicis, . ℥ij.
S., Teaspoonful four times a day.

—D. C. C. Barker, in *Therapeutic Gazette*, Jan. 1884.

Physiological Action of Adonis vernalis.—From a careful physiological and clinical study of the effects of Adonis vernalis, Dr Bubnoff arrives at these conclusions:—1. The active principle of Adonis vernalis excites the inhibitory nerves of the heart at the central end. 2. Its further action is to paralyze the peripheric end of the vagus. 3. It likewise excites the accelerating system of the heart, sometimes directly (through the blood-pressure), sometimes indirectly. 4. Up to the moment at which paralysis of the vagus occurs, the two systems of cardiac innervation interfere. 5. At the termination of the toxic effects, paralysis of the motor nervous apparatus of the heart apparently occurs. 6. After death there is either complete loss of excitability of the cardiac muscle, or it is very much weakened. In man this agent caused more gastro-intestinal disorder (vomiting and diarrhœa) than digitalis ordinarily does, and in certain individuals the effect upon the central termination of the vagus was more marked than from digitalis; and in one series of cases with disordered compensation of the blood circulation, after digitalis had failed, the adonis was given with decidedly good results (*Deutsches Archiv für Klin. Med.*, June 1883).—*Therapeutic Gazette*, Jan. 1884.

ADONIDIN.—Adonidin, the active principle of Adonis vernalis, is a glucoside which has been employed as a substitute for digitalin, which it resembles in its physiological and therapeutical effects. Adonidin is furnished in the form of an amorphous powder of a bitter taste, soluble in alcohol, much less so in ether or water. It is claimed to be free from a cumulative action, but more experiments are needed to establish its real value in medicine (*Medical Times*, Sept. 1883).—*Therapeutic Gazette*, Jan. 1884.

NITROUS OXIDE AND CHLOROFORM AS ANÆSTHETICS.—Nitrous oxide and ether are frequently administered in combination, or rather in succession, as a means of producing anæsthesia. The employment of a combination of nitrous oxide and chloroform has been recently advocated by M. de St Martin. Experiments on animals led him to prefer the mixture of 85 volumes of nitrous oxide with fifteen volumes of oxygen, and 6 or 7 grammes of chloroform added to each hectolitre. This mixture causes anæsthesia very rapidly, and the period of excitation is suppressed, and the chloroform, moreover, being much diluted, does not irritate the air-passages. The working zone of this mixture is far greater than that of chloroform alone (*Buffalo Medical and Surgical Journal*, May 1883).—*The Quarterly Therapeutic Review*, July 1884.

A NEW ANÆSTHETIC MIXTURE. — *The Medical and Surgical Reporter* for January 1884 states that Dr W. A. Byrd of Quincy has been using a mixture composed, by measure, of bromide of ethyl one part, chloroform three parts, alcohol four parts. These substances, mixed, form a clear solution of a pleasant odour, and of a warm, sweetish taste. It farther states that Dr C. W. Rook writes of its physiological action in the *Jour. Am. Med. Association*, 15th December 1883, thus:—" I have administered this anæsthetic to a number of patients, varying in age from early childhood to adult life; to those enfeebled by disease or suffering, and to those apparently healthy; for operations comparatively trivial, and for others which were protracted and serious; inducing and sustaining complete anæsthesia, in some cases only for a few moments, while in others for more than an hour: and in all these cases, with their varying circumstances and conditions, I have observed a remarkable similarity in the physiological actions of this anæsthetic. The stage of excitement or intoxication is brief, sometimes absent; if recurring, is never violent. The stage of spasmodic rigidity of the voluntary muscles seldom occurs; when occurring, it is not extreme. Following these stages when they are present, or within a few minutes of the commencement of the inhalation, the stage of complete anæsthesia is induced, when any unfavourable or alarming conditions or symptoms occurring in the preceding stages, as excitement or rigidity, will be relieved, so that the vital functions are carried on as regularly, and apparently as effectually, as if the patient was in a natural physiological sleep. The time required to produce complete anæsthesia is from one to three minutes in children, and from three to five, and possibly eight minutes in adults. A considerable amount of atmospheric air should be inhaled along with the anæsthetic. It may be administered through an inhaler, or simply a towel used as an inhaler. Anæsthesia has been produced in ninety-eight cases without causing any bad effects, save vomiting in three cases. The quantity necessary to induce and sustain anæsthesia depends, of course, upon the duration of the operation. A half drachm poured into the inhaler, or upon a towel, will generally be sufficient to induce anæsthesia, which may be sustained by the addition from time to time of half the former quantity.

CASCARA SAGRADA IN INTERNAL HÆMORRHOIDS.—During the past year I have used fluid extract of Cascara sagrada in the treatment of this troublesome disease, and have obtained far better results than from any other preparation I have ever used, especially in those cases where there is habitual constipation. I give enough of the Cascara sagrada in the beginning to produce several free evacuations, giving from 15 to 30 drops three times a day until the desired effect is obtained, after which give from 20 to 30 drops every evening at bed-time, enough to produce one or two evacuations the next day. Henry M., aged 45, farmer. Family history good. For several years past has been troubled with internal hæmorrhoids. For the past year has been nearly incapacitated from doing any work, always suffering severely, and at times losing considerable blood. He stated that at the time he did not dare to carry an ordinary wooden bucketful of water on account of the piles. He was troubled with constipation. I prescribed fl. extract. Cascara sagrada, to begin with 20 drops three times a day until it produced several free evacuations; and after that take from 20 to 30 drops every evening at bed-time, or just sufficient to have a mild laxative effect the following day. After taking the medicine about two weeks he expressed himself as entirely relieved, and he has remained so till the present time. More than six months have elapsed since the beginning of the treatment, and now does any work incident to farm life. I have obtained good results from all cases of internal piles complicated with constipation.—Dr John Elfers, in *Therapeutic Gazette*, Jan. 1884.

Chloral in Hiccough.—Dr G. C. Kingsbury, in the *British Medical Journal* for 19th Jan., recommends chloral hydrate in full doses. He relates the case of a man who suffered severely from this affection, in whom bromide of potassium, belladonna, spirits of chloroform, hydrocyanic acid, morphia, and other powerful remedies had been tried without benefit, and says:—"At last, after twelve days' incessant suffering, 30 grains of chloral hydrate induced sound and undisturbed sleep for six hours, and the patient awakened free from his tormentor." He adds, "I have since had several opportunities of trying chloral under similar, though less aggravated, circumstances, and have always found that a liberal administration of this drug produced prompt relief."

Bromide of Arsenic in Diabetes.—From the *Jour. de Méd. de Paris*, 13th Oct. 1883, we learn that Dr Pekai of Buda-Pesth has been much gratified with the success of this treatment. He began by putting three drops of the medicine in one ounce of water, and this was taken in three doses; this was increased by one drop every three days until ten drops were taken daily. The solution is prepared as follows:—Grs. jss. āā of arsenious acid and carbonate of potash, are placed in a brine measure; gtt. v. of water are added, and treated until the liquid is limpid. Then add sufficient water to make ʒijss. by weight. Add then grs. jss. of bromine, and leave for twenty-four hours.—*Medical and Surgical Reporter*, 5th Jan. 1884.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

The Papule of Prurigo.—Dr Morison of Baltimore has made a series of investigations into the anatomical structure of the prurigo papule in Professor Chiari's pathological institute at Prague, on material furnished by Professor Pick, and taken from patients under his supervision. From these he concludes that the papule is formed by an infiltration beginning around the upper layer of vessels of the corium, and that this, extending upwards, surrounds the papillary vessels, enlarges the papillæ, thus pushing up the epidermis, which becomes thickened at an early stage above them, and at last, penetrating it, forms within its layers a small vesicle containing serum, blood, and lymph-cells. The signs of infiltration surrounding the hair-sheaths and sweat-ducts are secondary, and they play no essential part in the process: their presence in the papule is accidental, and the primary changes in the skin are not in connexion with them. The colour of the papule at first does not differ from the rest of the surrounding skin, on account of the depth of the slight infiltration with which it begins; and for the same reason the papule is at first only felt and not seen. He regards the whole process as due to an inflammation, and that all the signs of chronic dermatitis therefore follow regularly, according to the length and duration of the disease and the amount of scratching which the itching, as a secondary symptom, causes. At the stage in the disease where the papule can only be felt as a small knot there is no itching, nor does this appear till the infiltration has so far advanced that the papules are more distinct. If before this occurs the treatment is begun, no itching manifests itself. This proves, as Kaposi says, that all the symptoms of the disease go hand in hand with the increase or decrease of the papules. The cause of the inflammation which starts the formation of the papule Morison does not know, and he gives his reasons for rejecting, in the meantime, the belief that prurigo is a neurosis.—*American Journal of the Medical Sciences*, October 1883.

RHINOSCLEROMA.—Observations on this disease have been hitherto limited to Vienna, but Pellizzari has had the good fortune to meet with a case at Florence, and has published an exhaustive monograph dealing with it. The affected person was a female aged 37, who had had twenty children, of whom only seven survived. Although her husband was syphilitic, he does not appear to have communicated his diathesis to his wife. The children died of nervous disorders, convulsions, epilepsy. The disease commenced about 1868; death occurred in 1882, mainly caused by the mechanical obstruction to her air-passages as a result of the continual increase of the growth. Antisyphilitic treatment had no effect on the progress of the disease. The author has little to say on the question of etiology. He believes rhinoscleroma to be a bastard product of syphilis, and that more may yet be said about syphilitic treatment as applied to it. The disease itself is characterized by the development of an infiltration of a homogeneous character, containing a number of cells of variable form and size, but nearly all of the embryonic type. The infiltration commences always in the neighbourhood of the vessels, and in the submucous tissue, whence it spreads. Pellizzari regards the process as an inflammatory one of a special kind. As for the cause, the author inclines to the parasitic theory. Rod-like bodies have been found within the cells, and aggregated into masses which stain strongly with gentian violet, in the intermediate tissues. Frisch has cultivated the organism, but so far inoculation has with him yielded no result. The author remarks: "To-day pathology has but a single note—the micro-organisms. It is a mirage, an illusion which will vanish to-morrow, but the imperious necessity which urges man on to test the reason of things has compelled us to-day to follow this scientific phase." The paper is very fully and well illustrated.—*Annales de Dermatologie et de Syphiligraphie*, September 1883.

APHORISMS ON THE TREATMENT OF ECZEMA. — Professor Auspitz remarks that in the beginning of eczema and at its acme only such measures are admissible as will tend to reduce to a minimum the vascular alterations which are then so easily aggravated, by the avoidance of external irritation, and which may lessen subjective sensations. At this period of the process, too, it is of great value to act on the tissue change of the organism, if any direct connexion between this and the skin disease can be suspected or proved. Auspitz finds the combination of vaseline with oxide of zinc and starch, with or without the addition of salicylic acid, replaces dusting powder very effectually. From its porosity it tends to absorb the serum, and remains attached to the skin, without being spread on lint, for a considerable time.

℞ Vaselini, . 50·0
Zinci oxidi,
Amyli purii, āā 25·0

This may be spread on the part once or several times a day, and, in order to make it cling more closely, may be dusted, in addition, with starch. In the later stages of eczema tar is most valuable, but in order to obtain its benefits without its disadvantages it must only be used in the scaly stage, must be applied in the thinnest layer, must be the purest unmixed distilled tar, and then must be dusted over with starch, or, if some irritability continues, is to be covered with Kaposi's diachylon ointment or with the vaseline paste above mentioned. Salicylic acid exerts a specific influence on the regeneration of the diseased epidermis. When employed dissolved in traumaticine, the particles of salicylic acid, which is not soluble in chloroform, must be powdered down and diffused as much as possible in the liquid.

℞ Acid salicylic in alcohole rect. sol., . 1·0
Traumaticini, ... 15–20·0

Bene misce ante usum, applicatio fiat cum penicillo setaceo mitiori. Extensive scaly eczema of recent date, in which tar, in consequence of its smell and colour, is inapplicable, appears quite healed after a few paintings with the salicylated traumaticine. Some of those old eczemas of the palm, which are the vexation of many physicians, have under its use shown such a remarkable improvement as to raise hopes that there may be no further recurrences.—*Wiener Medizinische Wochenschrift,* 8th December 1883.

XERODERMA PIGMENTOSUM.—Vidal gives an excellent and exhaustive account of this singular disease, of which, so far, only one case has been met with in Great Britain, but the details have not yet been published. The description which Vidal gives is as follows:—The skin disease which Kaposi has made us acquainted with under the name of xeroderma pigmentosum is a disease of families, a disease in-born or congenital, manifesting itself in early life, most frequently in several brothers or sisters, affecting almost exclusively children of the same sex—in one family the boys, in another the girls. It develops almost always during the course of the first or second year of life, by the appearance on those parts of the body which are exposed to light of red macules surrounded by pigmented spots. The skin then becomes dry, tense, and thin, takes a glistening, cicatricial aspect, and becomes dotted with telangiectases. The epidermis exfoliates in branny flakes, becomes rough on other parts, and, in course of some years, tumours of papillary and vegetating epithelioma appear in various situations. These form most commonly on one or several of the pigmented spots, by preference on the largest and most deeply coloured. The epitheliomatous tumours ulcerate, invade large surfaces, and the majority of the young patients succumb, between the ages of ten and twenty years, to the progressive generalization of the epithelioma, or to marasmus, worn out by the excessive suppuration. The only disease which in the early stage resembles xeroderma pigmentosum is urticaria pigmentosa, but here the disease appears by preference on covered parts. Duhring mentions also morphœa as very closely resembling it, and, indeed, thinks some of the recorded cases should be grouped with morphœa or scleroderma. Vidal gives a history of five cases, and tabulates thirty-one in all. Some well-executed chromo-lithographs accompany the paper.—*Annales de Dermatologie et de Syphiligraphie*, November 1883.

THE ELASTIC SKIN MAN.—This individual is a study of interest, and presents an extraordinary dermatological condition. The subject is a man of 35, a native of Nuremberg, apparently healthy, and with a skin which seems normal till it is touched, when a peculiarity is observed. It is movable, extensible, and elastic over the head, trunk, and extremities—in fact, over the whole general surface. Taking hold of the skin, it may be drawn out; as, for example, seizing the skin over the sternum, it can be drawn over almost his entire face, or that between the scapulæ over the back of his head. The distance to which it can be drawn from the surface depends upon the amount of skin grasped. The skin is extremely soft, and none of the movements give him the least pain. The condition is congenital. Pulling out the skin and holding it in front of a light, the circulation of the blood in the skin only is beautifully seen. The condition is supposed to be due to an absence of the subcutaneous connective tissue; but it is a question whether the subcutaneous connective tissue is not present, and attached to the fasciæ of the muscles instead of to the corium. The elasticity is shown by the fact that on drawing out the skin and letting it go it flies back. It is more elastic in some directions than in others, more when drawn transversely to the natural lines than parallel with the lines. As far as my information extends, the case is almost unique, there not being another case on record except that of a Spaniard about two hundred years ago. The forehead wrinkles naturally; and notwithstanding the amount of manipulation that the skin has undergone, it is exceedingly sensitive. This condition exists in lower animals, and particularly in dogs, cats, and rabbits. There is a condition known as dermatolysis which is analogous to that found in this man, but in this disease there is a state of marked hypertrophy, while here the skin is normal as to structure. As to its classification, it may be placed with dermatolysis.—Dr Duhring, in *Philadelphia Medical News*, 29th December 1883.

MEDICAL PERISCOPE.

By Francis Troup, M.D.

Riess, in *Berlin. Klin. Wochensch.*, on the antipyretic action of kairin, says that any antipyretic treatment worthy of the name must lower the body temperature certainly and decidedly, and keep it, in some degree permanently, near the normal. He insists on this point the more as several authors, themselves high-priests of antipyresis, emphasize the view that to make a fever temperature harmless all that is needed and all that is desirable is to bring about its intermittent reduction, and that any treatment directed to a continuous lowering of temperature should be rejected. But irrespective of this, that no one can convince himself that an intermittent or remittent high temperature is less harmful than a continuous one, the practical carrying out of antipyresis shows that the more consistently and decidedly it is managed, the more striking are the results; and only by methods which aim at and effect a lasting fall of temperature has Riess succeeded in favourably influencing the course of the febrile process. Twenty-five cases, consisting of typhoid, pneumonia, erysipelas, scarlatina, intermittent fever, phthisis, and acute gastric catarrh, were carefully observed, and hourly readings of temperature taken. At first doses ranging from 0·5 to 1 gramme were given. It was found that three or four hourly doses were needed to reduce the temperature to normal and to keep it there, and it was common to give fifteen to twenty doses in twenty-four hours. Soon, however, he came to try larger doses—1·5 to 3·5 grammes. The latter dose was only once given, and caused grave symptoms. The typhoid patient, nine days ill, whose temperature oscillated between 39° and 40° C., shortly after taking it became deeply cyanosed! and apathetic; temperature fell within twenty-four hours to 35°·8 C. = 96°·4 Fahr., and pulse to 36. Stimulants removed this condition, and in ten hours temperature was again 39°. Experience, then, taught that doses of from 2 to 2½ grammes were sufficient to give good results. Such doses were employed in continued fevers methodically for a considerable time, in order to obtain the most lasting temperature reduction. He was content to keep it under 39°, and not till that was exceeded was the dose renewed. Much more lasting decline of temperature was commonly observed in typhoid and pneumonia by the first large dose than when small ones were used. Indeed, temperature did not rise to 39° for the average period of six hours. In scarlatina and erysipelas similar results were seen. After-effects of large doses were like those of smaller ones: 2·5 gramme doses never brought about collapse conditions. Undoubtedly a slight degree of cyanosis, especially on hands and face, occurred. Temperature decline was never excessive, mostly to 37°, seldom to 36°. The slight delirium which sometimes accompanied the first doses was of no grave import, and had the character of a general feeling of wellbeing, patients saying they were quite well, etc., etc. Pulse was never unfavourably influenced; vomiting was very seldom seen; the urine was temporarily albuminous only a few times, but its known green, often black-green, coloration appeared speedily after the ingestion of the kairin. Shiverings appeared seldom, about nine times in one hundred doses. Perspirations were the only troublesome effects, and lasted longer than where small doses were given. If kairin is antipyretic it does not seem to be antiperiodic. Its influence on malarial fever seems similar to that of salicylic acid, and is not at all equal to quinine. Summing up the foregoing experiences, they show that to establish kairin as an antipyretic it must be given in massive dose. They corroborate, in agreement with some earlier observers, the safety and promptitude of its action, as well as the insignificance of its drawbacks; and further, they teach us, by employing larger doses of about 2·5 grammes, a methodically carried out treatment of cyclical fevers. In comparing kairin with better known antifebrile remedies, it is hardly yet permissible to place it right off, as some have done, as the best and strongest among them. It is curious that in those comparisons prominence has only been given to quinine, a drug which, in the gradualness of its action, has less of analogy with kairin than salicylic acid. But this latter far excels in energy and lastingness of effect, kairin, even in massive doses. Without entering into details, the fact may be mentioned that in the height of typhoid one large dose of sodium salicylate, assisted, perhaps, by two short baths, suffices to keep the temperature under 39°, an effect for which three or four doses of kairin would be requisite. Kairin has, however, an undeniable advantage, in the absence of any serious inconveniences after single doses, and in the favourable influence it has on feverish brain symptoms over other internal antipyretics. The manysidedness of the applicability of kairin in diverse forms of fever has been prominently spoken of; but this it has in common with quinine, and especially salicylic acid, which latter in sufficient dosage seldom fails to operate successfully. It is plain that, as yet, observations are too scanty to form a just estimate of the power of kairin treatment on the course of typhoid and kindred sicknesses. So much the more is it matter of wonder to find assertions made that such power is *nil*. And just as, in those diseases, baths and salicylic therapeusis can cause an average abbreviation of their length, it is probable that kairin treatment, thoroughly carried out in a sufficiently large number of cases, will yet show an easily recognisable and favourable influence on the course of fever.

TWO CASES OF CHRONIC MERCURIAL POISONING are mentioned by Neukirch, interesting enough owing to the cause, viz., the impregnation of the air of patients' sleeping apartments with mercurial vapour from imperfectly amalgamed looking-glasses. He supposes that such cases, in obscure forms, may be frequent enough, as one of his had suffered for four years before the cause was discovered.

REICHEL, of Breslau, reports a case of erythema universale occasioned by the use of a gauze bandage impregnated with dry corrosive sublimate. The male patient, æt. 20, had been operated on for left genu valgum. The straightened limb was covered with a bandage from ankle to groin, and all went well till the fifth day, when patient complained of burning and itching in the limb; and as this increased, the removal of the bandage became necessary, revealing an intense papulo-vesicular eczema in the whole length of the leg. At the same time a widespread erythema, most intense on breast, belly, scrotum, inner side of right thigh, and on the extensor surface of both elbow-joints, made its appearance. Face and neck were free of eruption. There was no salivation. No treatment save withdrawal of the bandage was instituted, and in a few days, without peeling of skin, the rash had passed off. This is the first case in the Breslau klinik, where sublimate bandages have been in use for nine months, of any evil results from them, at least of the widespread erythematous kind. Eczemas locally are, however, more frequent with the sublimate gauze than with the carbolic.

DR SCHAEFFER recommends the treatment of diphtheria by papayotine. Papaine, or papaw, is an extract from the acrid milky juice of *Carica papaya*, the papaw tree. Dr Schæffer thinks that had diphtheria not shown itself so extraordinarily changeable in its character, some specific remedy against the malady would already have been discovered. But every medicament which had shown itself specific in one epidemic, and on that account been warmly recommended, in another epidemic, in another country, or under other local conditions, in spite of apparently quite similar external symptoms, has proved entirely useless. It has thus come to pass that the literature of the last ten or fifteeen years is very rich in specific remedies for diphtheria. Some praise gargles of Condy's fluid, potass chlorate, and lime-water, others salicylic or boracic acid, others insufflations of sulphur, spraying with peroxide of hydrogen in ethereal solutions. Wagner prescribes appropriate solvent and specific disinfecting means. To the former belong lime-water, lactic acid, lithium carbonate, pepsin solution; and to the latter inhalations and insufflations of alum, tannin, flowers of sulphur, chlorate of potass, permanganate of potass, salicylic and sulphurous acids, several sulpho-carbolates, iodine, bromine, cinnabar, peroxide of hydrogen, sulphuric ether, glycerine and spirit of wine. Hydrofluoric acid, citric acid, eucalyptus oil in vapour, benzoate of soda, and liq. ferri perchlorid. in large doses, are also prescribed. Rokitansky, Schwarz, and Korn recommend chloral-hydrate. Still later, pilocarpin, used subcutaneously or internally, came stoutly to the front, and was supposed to dissolve the fungoid false membranes quickly and unirritatingly by exciting the salivary secretion. Cyanide of mercury, and lately chinolin, have also been praised as antidiphtheritic. From the great number of remedies quoted it is easy to see how rebellious this malignant disease is to treatment, and how different are the relations which individual cases have to each other, and how variable the diphtheritic poison must be. Schaeffer in nine years had seen four epidemics, and had opportunity of abundantly trying the greater part of the above cited medicaments with no constant result; and thus Rossbach's opportune experiments to ascertain the solvent powers of papayotine upon albuminous matter and diphtheritic membranes awakened great interest and hope. The usual mode of application is pencilling with a five per cent. solution. This must be done early and with circumspection, so as to injure no sound part and thus favour a quicker immigration of micrococci. The pencil after use must be carefully cleansed, and the solution tightly corked. Moreover, care must always be taken that the papayotine is fresh, because older specimens absorb water and become considerably impaired or even paralyzed altogether in power. If the pencillings are begun early and done every ten to fifteen minutes, then in from two to five hours every patch of false membrane has totally disappeared. Two bad cases are related—one a child of 2¼ years, with a temperature of 41°·2 C. = 106°·1 Fahr., and pulse of 152. Therapeusis was antipyretic and pencilling every ten minutes with papayotine. After five hours of this and one gramme of sodium salicyl., temperature was 38°·3 C.= 100°·0 Fahr., and pulse was 112. Throat and tonsils free of patches, only vividly red. As often as any small patch showed itself the brush was again used, and after three days' treatment the collective symptoms had vanished. Another case was that of a nine-year-old girl, scrofulous and with very high fever. Examination revealed great swelling of submaxillary glands, and thick, bacony pellicles on the tonsils of both sides as well as on the back of throat. Temperature 41°·7 C. = 107° Fahr., pulse 132. Therapy: antipyretic, one gramme of sod. salicyl. at once, and pencillings with papayotine. After five hours' brushing nothing was visible in the throat abnormal save vivid redness. Temp. was 39° = 102°·2, and pulse 108. No more salicylate was given, only pencilling was continued as often as any white point showed itself. The fever gradually sank in two days' treatment to 38°, but always rose when any pellicle thicker than usual formed, which again disappeared after a few hours of diligent painting. Forty-seven cases have been treated in this way, with two deaths. What struck Schaeffer much was the circumstance that with the removal of the patches the fever sank, so that with him the opinion became a settled axiom, that diphtheria was a local disease which produced a general infection by the immigration of micrococci into the blood. Oertel, Klebs, and others have demonstrated with a clearness not to be gainsaid that fungi have their seat in the false membranes, and that their multiplication is inversely proportional to the duration of their life. It is therefore plain that a medicine which eliminates the death-bringing infective matter so speedily from the body must be of the highest utility. One disadvantage of this treatment is the high price of papayotine, one gramme costing four and a half marks = four shillings and sixpence.

Professor Dr C. A. Ewald, editor of the *Berlin. Wochenschrift*, supplements this paper as follows:—Seeing that the influence of papayotine upon diphtheritic membranes has now been confirmed from many sides, seeing that its action is local, and having regard to its costliness, Ewald suggests the employment of a powerful pancreatine. The action of papayotine is manifestly not a specific one specially directed against diphtheritic membranes, but is founded on this, that it represents, in alkaline or neutral solution, a very powerful ferment which can dissolve coagulated albumen. Pepsine has failed because it is only effective in acid solution, and the mouth-fluids are usually alkaline or neutral. But pancreatine, either dry or contained in a glycerine extract of the pancreatic gland, offers us a similar preparation to papayotine so far as regards its albuminolytic properties, and whose cost is much less. The selection of therapeutic materials with which to combat such a malignant and deceitful disease as diphtheria cannot be too large. But let no man believe, either in papayotine or in any other means directed against the local process, that he has found a prophylactic against systemic infection.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. Milne Chapman.

Habitual Miscarriage: its Causes and Prevention (Grandin, *American Jour. of Obstet., etc.*, December 1883).—The writer first insists on the fact that the so-called habit of miscarrying is always due to some unrecognised but still recognisable cause. These causes he proceeds to consider seriatim:—1. Syphilis.—When the mother escapes, so does usually the child. When the mother is affected, then there is not only to be taken into consideration the probable death of the child, but also it must be remembered that probably there will be present some local uterine mischief, most frequently in the endometrium, which may, apart from any fœtal syphilis, lead to abortion. Hence, in treatment, not only must mercury be given to both parents, in the hope of producing a healthy child, but, in addition, the mother, while pregnant, should take chlorate of potash and iron, the better to nourish the child through the diseased decidua. The author states that he has found those drugs markedly beneficial in such cases. When a syphilitic habitual aborter is not pregnant, means should be taken to improve the condition of the endometrium. In conclusion, the writer advocates the induction of premature labour in such cases "as soon as the child is viable, should there appear evidence of heart failure." 2. Maternal anæmia.—Under this heading the writer quotes from Cazeaux to the effect that paternal anæmia may also be a cause of abortion, and advocates that both parents should be treated if there is any ground to suspect such a causation. 3. Uterine disease and diseases of the uterine appendages, especially endometritis, frequently cause repeated abortions, and, if so, demand energetic and prolonged treatment, care being taken, meanwhile, that conception does not occur. 4. Uterine displacements. 5. Chronic cellulitis and peritonitis, especially when adhesions are present. 6. Laceration of the cervix.—"The usual result of this lesion is, as might be expected, sterility." "It is perhaps impossible to do more than infer that laceration of the cervix may be a cause, for it is to be borne in mind that the laceration itself brings in its train many evils, any one of which is sufficient to cause miscarriage—such as inflammation of the cervical and corporeal endometrium, subinvolution, cellulitis." "The treatment lies in the repair of the rent, not neglecting, of course, associated conditions." 7. Intermittent fever, either as a direct result of the fever or from the accompanying anæmia. 8. Chorea.—"Doubtless a partial explanation of its action is succussion of the uterus; it is not unlikely, however, that the associated anæmia enters as a factor." 9. Bright's disease.—"The best part of the treatment must be the prevention of conception." Patients suffering from chronic Bright's—particularly the parenchymatous form—had best, where possible, be dissuaded from marriage; in case of marriage, they ought to use means for the prevention of conception, since they are not fitted for the function. Whilst they might go to term, it is questionable whether their own health might not deteriorate. The extra burden imposed by pregnancy cannot but have an unfavourable effect on the mother's health. Should she escape miscarriage, the child, though born alive, if it do not inherit its mother's disease, certainly stands small chance of good health." 10. Tumours, either by irritation of the uterus or by preventing its proper development. Treatment, of course, is to be undertaken in the interval, and it will be good advice to caution patients suffering from the submucous or interstitial varieties of fibroids, as well as carcinoma, against conception. 11. Lead-poisoning, principally from the anæmia occasioned by it, but sometimes by poisoning of the fœtus. Treatment, of course, is obvious when the cause is recognised. 12. Reflex conditions.—

Under this heading the writer only considers cases where, from an unusually excitable nervous system, miscarriages are apt to occur, as in "delicately nurtured," "highly impressionable," "hothouse-plant" women.

CONTRIBUTION TO THE NATURAL HISTORY OF UTERINE FIBROIDS IN THEIR RELATIONSHIP TO PREGNANCY AND DELIVERY (Dolores, *Archives de Tocologie*, 1883).—This contribution is founded on a clinical and pathological examination of several personal cases and the collection of cases reported by others. As a result of the histological examination of his material the writer states his opinion that the increase of growth occurring in fibroids during pregnancy is not due to increase of their muscular elements, but to a proliferation of their connective tissue elements and a tendency to colloid or mucous degeneration, which latter condition is most marked in pediculated and cervical tumours, and least marked in those of an interstitial character. The bloodvessels are characteristically differently altered in the two classes of tumours; and the lymphatics, which are extremely difficult to be recognised during the unimpregnated condition, are distinct and consist of a branched network with numerous spaces. The diminution in the size of uterine fibroids after delivery is accounted for by the writer as being partly due to absorption, partly to the formation of cicatricial tissue from the young connective-tissue cells. Two personal cases are reported where puerperal septicæmia supervened, and the tables of Lefour are cited, from which it is seen that of 286 cases of fibroids complicating pregnancy 141 died, and of these 64 from sepsis; and from these facts the writer concludes that the occurrence of septic poisoning is of much greater probability in such cases than in others, a circumstance which he finds explained by the great dilatation of the lymphatics, which he describes.

UTERINE FIBROID AS AN OBSTRUCTION TO LABOUR (Netzel, *Centb. f. Gynäk.*, 1883, No. 52).

DYSTOCIA OCCASIONED BY A FIBROID IN THE CERVIX UTERI; PORRO'S OPERATION; RECOVERY.—(Denarié-Fochier, *Archives de Tocologie*, June 1883).

STUDY OF THE PHYSIOLOGICAL AND PATHOLOGICAL ELECTRIZATION AND CONTRACTILITY OF THE UTERUS (Onimus, *Archives Gén. de Médecine*, 1883, Bd. 1, p. 641).—This paper is founded on experiments on animals: trials on the human gravid uterus are but little referred to. The fact is pointed out that unstriped muscle differs from striped in responding most readily to constant currents. For use during labour the writer recommends that the poles be placed over the lumbar vertebræ. For the induction of premature labour the negative pole is to be placed on or in the cervix. For ovarian neuralgia, dysmenorrhœa, and membranous dysmenorrhœa, he has found the use of strong constant currents during the periods of service, as also for diminishing the hæmorrhage from fibroid tumours. He does not believe that electricity benefits such tumours in any permanent way.

DURATION OF THE MENSTRUAL HEMORRHAGE IN RELATION TO THE DEVELOPMENT OF THE FŒTUS AT TERM, AND TO MULTIPLE PREGNANCY (Cuzzi, *Rivista Clinica* and *Annali Univ. di Med.*, July 1883).—In this paper the author seeks to establish his conclusions on the basis of much statistical material collected in the clinics of Modena, Milan, and Turin. He was led to this research by the idea that by the amenorrhœa of pregnancy a so much greater quantity of maternal nourishment was retained for the benefit of the fœtus, as the sanguineous loss was greater in menstruation. Not being able to determine exactly the quantity lost at each period, he took its duration as a guide, which, considering the number of his observations, may be regarded as more or less equivalent. As to a longer duration of the menstrual hemorrhage, a corresponding ovarian activity can be supposed; so also the hypothesis may be justified of a more easy rupture of more ovisacs, and a greater probability of multiple pregnancy. From the analysis of very numerous observations, Professor Cuzzi thinks himself justified in formulating the following conclusions:—1. The weight and length of the fœtus at term are in direct relation with the number of days menstruation occupied. The longer the usual period of menstruation, the heavier and larger the fœtus. 2. There is a direct relation between multiple pregnancy and the duration of the menstrual period. That is, multiple pregnancy is most frequent in women in whom the period is long and the loss free.—*London Med. Record.*

CONTRIBUTION TO THE PHYSIOLOGY OF LABOUR, ILLUSTRATED BY THE HISTORY OF A CASE OF LABOUR DURING PARALYSIS (by A. C. Bernays, M.D., Reprint from *St Louis Med. and Surg. Jour.*)—The patient, a multipara, suffered from paralysis of the lower limbs and a part of the trunk, the result probably of a syphilitic lesion of the cord about the level of the seventh cervical vertebra. When she became thus affected she was three months pregnant. The pregnancy went to full term, and at the confinement, in place of the usual interrupted labour pains, there was but *one continued contraction of the uterus*, which resulted in the expulsion of a large, well-formed, healthy child. The delivery was accompanied by a very small loss of blood, as was also that of the placenta, which followed spontaneously about five minutes after the birth. The whole process lasted about thirty minutes. Towards the end of the second week there was a severe hæmorrhage; otherwise recovery was uninterrupted. In speaking of this case the writer says: "The lesion involved both anterior and posterior columns of the cord, as evidenced by the complete loss both of motion and sensation. In other words, we may suppose that all possible connexion between the lower portion of the body and the brain was nearly severed by the gummy tumour. So far as is known, the only nerve fibres which reach the womb are derived from the ganglia and plexus of the grand sympathetic. The researches of Frankenhäuser, published as a monograph at Jena in 1867, show that the nerves of the womb are derived from the aortic plexus and from the lumbar and sacral ganglia. Any connexion with the spinal marrow must pass through these plexuses. Schlesingar, by his experiments on rabbits and dogs (published in the *Vienna Annals of Medicine*, 1872), claims to have found that the centre for motions of the womb is in the medulla oblongata. We have strong ground for thinking that, if any such centre exists, it was not in connexion with the womb in our case, on account of the disease in the spinal cord which caused paralysis. On the other hand, we have during the past years, based on numerous researches, arrived at a point where an independent action of the sympathetic ganglia is placed in doubt. The natural conclusion, therefore, is that the contraction of the womb is solely produced by the direct irritation occasioned by the *fatty degeneration* of the decidua, which we positively know takes place during the last month of pregnancy." To account for the easiness of the labour, the writer mentions that the pelvic muscles were paralyzed and the perineum and adjoining structures flaccid and flabby, thus reducing resistance to a minimum.

A NEW OPERATION FOR THE REDUCTION OF CHRONIC INVERSION OF THE UTERUS (by B. B. Browne, M.D., *New York Med. Jour.*, 24th Nov. 1883).—The writer adopted the following method of treatment in a case that had resisted several attempts at replacement:—The bowels and bladder having been evacuated, the patient was placed under ether, the inverted fundus was drawn outside the vulva with a strong vulsella forceps, the openings of both Fallopian tubes were brought plainly into view, and an incision one inch and a half in length was made through the posterior portion of the uterus (avoiding the Fallopian tubes and larger vessels at the sides of the uterus). Through this incision Sims's large dilator was passed up into the cervix and expanded to the fullest extent; the rigid tissues of the cervix were felt to relax; then, upon withdrawing this dilator, Nos. 2 and 3 of Hanks's hard-rubber dilators (three-fourths and one inch in diameter) were passed through the cervix. The finger was also passed to feel that there were no adhesions. The incision in the uterus was then sewed up with carbolized silk-worm gut, and, with slight manipulation, the fundus was easily replaced through the now passable constriction. The whole operation was performed in less than thirty minutes. There was considerable hæmorrhage from the uterine cavity when the uterus was first replaced. On the next day the temperature was 102° Fahr., but gradually returned to the normal condition, which it reached on the fourth day. During the first week she complained of severe pain in the uterus, but this was controlled by full doses of opium. She was placed upon the table and examined twelve days after the operation. The cervix was somewhat patulous, but, with this exception, the parts were all in a normal condition. The following conclusions are then drawn:—1. This operation is not proposed to supersede ordinary taxis in the reduction of chronic inversion of the uterus. 2. It is not more dangerous, but much more certain, than prolonged or rapid taxis. 3. We avoid the danger of bruising the tissues and rupturing the vagina. 4. As an operation for inversion, it is less dangerous than laparotomy. 5. Unless there be adhesions (which rarely exist), we can always feel certain of reducing the inversion at one operation.

A SOMEWHAT UNUSUAL CASE OF TWIN PREGNANCY.—In the *Australian Medical Journal* Dr Walsh reports a case where, twenty-nine days after the birth of a child, a second one was born. The woman had been attended by a midwife. She had made a good recovery, had nursed the first child, and was perfectly unaware meanwhile that she carried a second in utero.

ON A "NEST" FOR INFANTS ("De la couveuse pour enfants," by A. Auvard, Interne à la Maternité de Paris, Reprint from *Archives de Tocologie*, 1883).—The writer begins his paper by describing the nest devised by Professor Tarnier, and used for two years in the Paris Maternity. This consists in a chamber for containing the child, which is fixed over a reservoir of water kept always at a suitable temperature. A full description of this apparatus is given; but as the author considers it too cumbersome for private practice, he has devised a simpler form, a description of which we append. Budin, in La Charité Hospital, uses a nest heated by gas, and to which is attached a Regnard's regulator similar to that used in an incubator, as also an electric bell alarm, to draw the attendant's attention to any undue change of temperature. Winckel has employed for a similar purpose permanent warm baths, and these Auvard admits are somewhat more effectual than is the nest or incubator for cases where there is a decided diminution of the body temperature. Full directions for the feeding, clothing, and attending to infants treated in the incubator are given in the paper, and to the original we would refer those desirous of giving the method a trial.

As to the results obtained, Dr Auvard divides the cases, numbering 151, that have been so treated into two classes—1st, all children with an initial weight of less than gr. 2000 (roughly, 4½ pounds); and 2nd, children born in a weakly condition from such causes as syphilis, cyanosis, œdema, etc. Cases of the first class alone are capable of comparison with children brought up in the ordinary way, and of these we give a few examples. Child of six months and six days' intra-uterine life, weighing 1720 grammes, kept for 46 days in the incubator, at the end of which time it was taken out alive and healthy. Child of 6½ months, 1820 grammes, kept 5 days in, taken out well. Child 1630 grammes, 11 days in the nest. Child of 1530 grammes, 9 days. Seven months' child, weighing 1400 grammes, taken out in good condition after 12 days in the nest, and so on. In reply to the objection that children of even 1100 grammes have been reared by ordinary means, Dr Auvard says that such cases are extremely rare, and have resulted satisfactorily chiefly from the immense amount of care and trouble that have been bestowed upon them, trouble which is reduced to a minimum by the use of the incubator. The following statistics he gives to prove the value of this method:—

Infants weighing less than 2000 *grammes at Birth.*

Incubated.		Without incubator. Cochin Maternity, 1882.		Without incubator. Paris Maternity, for two years previous to its use.	
Lived, .	49	Living, .	10	Living, .	46
Died, .	30	Dead, .	20	Dead, .	76
Total,	79	Total,	30	Total,	122
Mortality,	38 %	Mortality,	66 %	Mortality,	65 %

This table speaks for itself, and shows strikingly the value of the incubator for premature children.

The writer then goes very fully into the subject of the variations in the respiration, pulse, and temperature of children reared in the incubator, and appends a table of all the cases treated in the Paris Maternity Hospital by means of it.

The improved form which he recommends will readily be understood by a reference to the accompanying figures. It consists of a wooden box, divided into two spaces by an incomplete horizontal shelf (Fig. 2, P). The lower portion, in which are placed hot-water bottles, has two openings, the one (Fig. 1, O) occupying the whole length of the side, and closed by a sliding door, the other (Figs. 1 and 2, T) covered by an incomplete panel, so as to permit of the entrance of a current of fresh air. On the shelf is arranged a small bed for the child, and on the top of the box over it there is a small window (V), which can be opened at will by means of the handles (*b*, *b*). At H there is an exit opening, which may be filled with an indicator to show the amount of current present. At the point of communication between the upper and lower chambers is placed a wet sponge to moisten the air, as also a thermometer. To prepare the apparatus for the reception of an infant, three bottles (Fig. 3) full of boiling water are placed in the lower compartment, and in half an hour the temperature of the nest will be found to be about 32° C. In two hours a fresh bottle is added, and thereafter every hour and a half or two hours one of

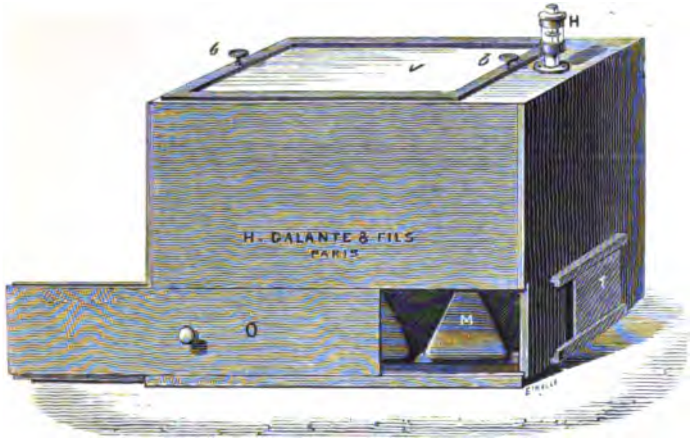

Fig. 1.

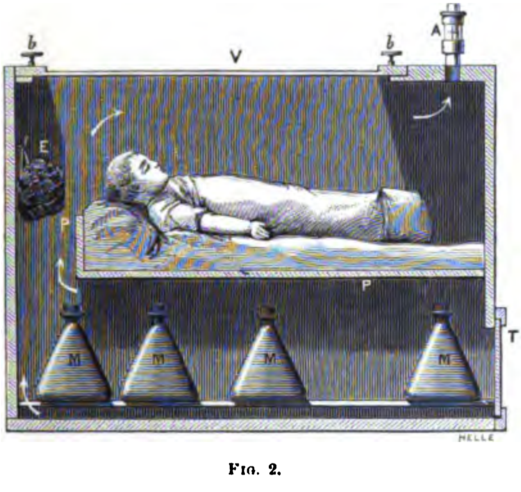

Fig. 2.

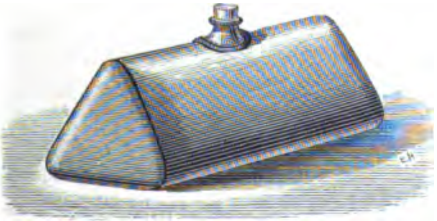

Fig. 3.

the cooled ones is replaced by a hot one. By attending to the glass cover the temperature is easily kept from rising too high. A current of air is kept continually entering at T, which passes over the hot-water bottles, past the sponge (which must be kept wet), through the compartment in which the child lies, and out at A (Fig. 2).

The author adds to his paper a very full bibliographical index.

SURGICAL PERISCOPE.

By A. G. Miller, F.R.C.S.E.

The *Lancet* of the 26th January publishes a paper by Professor Ogston of Aberdeen on "Flat-Foot and its Cure by Operation," which was read at the Medical Society of London (by invitation) on 14th January. The paper is so important that we would gladly reproduce it entire. For the benefit of our readers we will give as much as we can, and as nearly as possible in the exact words of the able writer. In describing the exact character of the deformity in flat-foot, he says, "The arch of the foot suffers, and the bones, tendons, and ligaments that maintain the shape of the instep are so modified that the arch unfolds, its two extremities recede from one another, and its curve finally becomes a straight line, touching the ground along its whole length. Examination of such a foot may reveal a slight laxity of all its articulations, but there are always great changes at the joint between the scaphoid and the head of the astragalus, forming the inner half of the medio-tarsal, or Chopart's, articulation. . . . . When the arch is flattened, the ligaments beneath become elongated, and on the under surface of the joint the bones tend to become separated from one another, while on the upper side the pressure between them is increased." Hence the pain at that particular spot. "Hence growth is checked, or absorption even takes place, at the upper halves of the articulations of the scaphoid and astragalus; while the lower halves, where the mutual pressure is lessened, show a tendency to separation and increased growth of the separated surfaces. The increased growth takes place mainly in the astragalus, so that the joint is not found gaping below, but the caput tali is changed in shape, becomes somewhat square in form, and presents an abnormal ridge or projecting angle, dividing its articular facet into two portions, one articulating with the scaphoid, the other with the inferior calcaneo-scaphoid ligament. When this disposition of bone becomes very prominent, the flat-foot enters on its permanent stage, and the more marked the projecting angle becomes the greater is the resistance offered to the reduction of the deformity. The angle ultimately projects so much that it locks on the scaphoid, and no reduction is possible until it be removed. The relaxation and subsequent alteration of shape in the bones of Chopart's joints are the key to the disease and its successful operative treatment. . . . . I have given much attention to these cases, and have tried many plans of treatment. But, to give the experience of a good many years in one sentence, none of the plans of treatment I have tried have had in my hands any effect whatever in the cure of the disease. When observing the disease, and my failures in its treatment, I could not help being struck with the prominent part played in its production by Chopart's joint, and became convinced that, could any method be devised of restoring the joint to its normal position and rigidity, or even of causing bony anchylosis there, it would almost surely result in a cure. From observing that so long as the manipulating hand held Chopart's joint firmly reduced, so long the deformity was apparently cured, the inference was natural that any method of imitating from within the effect of this support from without would have a good prospect of radically curing the disease. Anchylosis between the astragalus and the scaphoid could do no great harm, for there are so many other points at which the tarsus is movable that probably the rigidity of this one joint would entail no inconvenience." Professor Ogston then describes the operation which, after many trials, he selected as the best. "The object of the proceeding is to denude as much of the cartilaginous surfaces of the astragalo-scaphoid joint as can conveniently be reached, to place the foot in proper position, and secure its immobility by uniting the two bones by ivory pegs." The strictest possible antiseptic preparations having been made, "The foot, lying in the assistant's grasp without any attempt being made to reduce the deformity, is placed with its outer side resting on the operation table, and an incision, an inch and a quarter long and parallel to the sole, is made along its inner side over the joint, dividing all the structures down to the bones. . . . . If the incision be carried down to the bones by the first movement of the knife, the head of the astragalus, partly covered with cartilage, will be observed through a button-hole in the capsular ligament in the depth of the wound if its edges be retracted by aneurism needles. . . . . After the caput tali has become visible, free access to the joint has to be obtained by separating the attachments of the ligamentous capsule to the edge of the scaphoid for a distance of half an inch on each side of the wound. The ligament is seized by a dissection forceps, elevated, and detached from its insertion into the scaphoid, its connexions with the periosteum and fibrous structures over the scaphoid being maintained as far as possible by cutting with the edge of the scalpel directed towards the toes, the blade lying parallel with the bone. In this manner a somewhat T-shaped opening is made into the joint, and sufficient access is gained for the next step of the operation, the denudation of the bones. A stout chisel, half an inch broad, bevelled on one side, and provided with a wooden handle, is held in the right hand with the bevelled side away from the caput tali, while by its means the articular cartilage is shaved away from the whole of the exposed surface of the bone over as great an extent as is possible, a thin layer of the subcartilaginous bone being also removed, so that the cancellous structure is well laid bare. The chisel is next applied to the scaphoid, the bevelled side being held towards it, as the surface to be here denuded is concave, and by repeated shavings the denudation is carried as far as possible between the bones. In this manner each bone is bared of its cartilage, and if the arch be now restored to its normal position by the assistant, the two surfaces are found to correspond, the head of the astragalus retreating into its normal position behind the scaphoid. If the deformity be of old standing, and the bones have adapted themselves to their altered position, it is not possible to restore the arch until, by means of the chisel, the prominent angle that has formed on the lower surface of the astragalus head has been shaved off, and the rounded form of the head restored; but when this is accomplished the arch is easily put into its proper shape. The next step of the operation is to nail the bones together by ivory pegs. The joint is washed out with 1 in 20 carbolic lotion, and the arch of the foot is restored to its normal shape by the assistant depressing the metatarsus. The scaphoid after this movement covers the head of the astragalus, and the denuded surfaces lie opposite one another, separated by an interval of about a quarter of an inch, caused by the removal of so much bone. In the milder cases the arch is perfectly restored to its position. Even in the severer cases it is much improved. In its restored shape it is held fast by the assistant while the operator drills two holes through the scaphoid into the caput tali. . . . . The point of the drill[1] is placed on the upper and inner side of the scaphoid, the drill is pointed towards the centre of the caput tali, and when its direction has been well determined it is set in motion, piercing a hole an inch and a quarter in depth through the two bones. On withdrawing the drill an ivory peg[2] is held ready to be put into its place. When it is withdrawn the peg is placed in the hole, and driven home by a series of light taps with a small mallet. After it has entered for rather more than half its length its projecting end is cut off level with the scaphoid by a bone forceps. A second perforation is then made, parallel to the first and nearly half an inch distant from it, through both bones, and a second peg is driven home in it. . . . . The bones are so firmly fixed together by the pegs, which can be seen crossing the gap that separates them, that when the assistant removes his hand the foot remains in the improved position." The wound is then dressed according to Lister's method. "This operation I have performed seventeen times, in ten patients; and in one case, operated on 8th December last, I pegged on the left foot the joint between the scaphoid and internal cuneiform as well as Chopart's joint, because its movement seemed unusually free. My patients have all, without exception, remained free from fever, the thermometer not rising above 100° F., save when two of them, while still under treatment, were attacked by sore throat, lasting for a day or two. The wounds remained aseptic, and the dressings were renewed only a very few times. In some of the patients a slight tenderness and pain on trying to walk at the end of six or eight weeks indicated that the joint was still unanchylosed, doubtless from the slow repair due to defective circulation. They were often permitted to walk a little at the end of two months, and to use the foot freely at the end of three months; but I think that any use of the feet should, as a rule, not be permitted until three months have elapsed, as bony union is slow in such individuals. In all my patients, to the best of my belief, great benefit resulted from the operation, and in most of them bony anchylosis and a painless arch were obtained. They mostly resumed their laborious occupations, and were able fully to bear all the demands made upon them. One patient subsequently died of heart disease. In one patient an ivory peg was spontaneously and painlessly extruded by a small cutaneous opening five months after the operation; but in every other instance they remained, probably to undergo slow absorption or vascularization. Another patient, while under treatment, complained that one of his feet operated upon ached a little, and was never quite satisfied with the result in that foot. Yet he underwent a season of heavy harvest-work after leaving the infirmary. He returned again last November, and a little fulness was then detected about the calcaneo-cuboid joint of the right foot, the one which had ached. Both were put up in plaster-of-Paris for two months, and when these were removed at the beginning of this month the feet looked perfect. The restoration of the arch of the instep was absolutely perfect in this case. In a few of the other patients the plantar arch was restored to perfection. But this was not generally the case. In all it was, however, much improved, and added to the patient's lightness of step, even when to a surgical eye traces of the deformity remained. One of my cases is still under treatment. Knowing how much the prolonged rest following the operation would of itself tend to improve such cases, and alive to the temptation to be sanguine and over-confident in judging of the results of one's own work, I have endeavoured to free myself from any bias, and to form a true estimate of what was due to the operation itself in the improvement that resulted. Such of the patients as were accessible were seen or written to at considerable periods after the operation, and were warned that the information they gave was required not to gratify me, but to determine whether the same operation should be tried upon others. They all, save the patient mentioned above, maintained that the operation had cured them, and that they would willingly undergo it again on account of the benefit they had derived from it. My own impression is that this mode of treatment is likely to be of use in suitable cases uncomplicated by other disease, and where none of our other methods can be relied upon. I therefore think it desirable that it should be tested by others, should they deem it worthy of a trial, and receive its verdict according to the results it may yield in their hands." We have allowed Professor Ogston to speak for himself, and we believe that his modest and frank statement will meet with a ready response; for it is evident from his able description of the pathology of flat-foot, and of his method of dealing with that affection, that all surgeons will be induced to adopt the treatment. It is to be hoped that with the operative procedure the careful antiseptic precautions and dressings will not be omitted, as otherwise damage to limb, if not to life also, may be the result. These joint operations are truly edged tools that none should wield unless they can do so aseptically. The *Lancet's* report of the discussion after Professor Ogston's paper reads as if it was not appreciated. Perhaps the London surgeons do not believe that any good can come out of a place so far north as Aberdeen.

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[1] "The best drill, to my thinking, is an archimedean drill, such as is used by carpenters, fitted with what are sold as "broaches" (No. 40) by the wholesale watchmakers, and which form good drill points. They should be somewhat less in size than the ivory pegs to be employed. The drills cost 3s., the broaches 3½d. each."

[2] "The pegs are prepared from the finest ivory knitting-needles, sold in the Berlin-wool shops as ivory knitting-pins, No. 13, Wynn's bell gauge, and are about 8 inches long, and of the size of a No. 7 or 8 catheter, French scale, or a No. 2, English scale. They should be cut with a fine saw into pieces 3 inches in length, which are sharpened at one end by a file, and boiled in a 1 in 20 carbolic water for ten or fifteen minutes until they lose their whiteness and become impregnated with the disinfectant lotion, after which they are preserved in a 1 in 8 carbolic oil. Or they may be prepared by Neuber's method of prolonged soaking in German oil of juniper, and afterwards preserved in absolute alcohol. I have not yet used them as prepared by the latter method."

PERISCOPE OF STATE MEDICINE.

By James Allan Gray, M.A., M.D. Edin., F.R.C.P.E.

A Ventilated Down Quilt.—One of the latest inventions is Pocknell's ventilated down quilt. The principle of its construction consists in the quilting being performed by means of a hole through the stud or tuft, whereby, of course, ventilation is also secured. We are told that its sanitary advantages have been approved by local medical men.

Chemical Character of the Violet Colour in Ergot, and its Detection in Flour.—R. Palm reports that the colouring matter in ergot is not, as commonly supposed, combined with alkaline earths. For its detection in meal, the sample is dried and extracted at 30° to 40° C., with ten to fifteen parts of alcohol of 35 to 40 per cent. (Tralles), with the addition of a few drops of ammonia. The mass is then carefully pressed out, the liquid thoroughly precipitated with basic lead acetate, the precipitate collected on a filter and pressed between folds of bibulous paper, and the residue, whilst still moist, digested with a saturated solution of borax at a very gentle heat. The solution, if ergot be present, takes a characteristic violet colour. For detecting ergot in bread the sample is dried and powdered, then heated gently for 5 to 10 minutes with 10 to 15 parts of alcohol of 40 per cent. The liquid is filtered through animal charcoal, the filtrate evaporated almost to dryness on the water-bath, and the residue, still moist, is extracted with alcohol of 40 per cent. The solution is again filtered through animal charcoal and perfectly precipitated with basic or neutral lead acetate.—*Zeitsch. für Anal. Chem.*, quoted in *New Remedies*, Dec. 1883, p. 365.

PREVENTIVE INOCULATION OF SCARLATINA WITH SCARLATINAL VIRUS DERIVED FROM A HORSE.—In the *Medical News* of Philadelphia (1st December 1883, page 605) note is taken of the report by M. Stickler, in the *Gazette Médicale de Paris* of 29th September, on the result of inoculations with nasal mucus of a horse suffering with an affection which was believed to be identical with human scarlatina. Six drops of the mucus were inserted under the skin of four rabbits and a dog, and twenty-four hours later there appeared on them a confluent scarlatiniform exanthem, which terminated in four days in a lamelliform desquamation. These appearances were accompanied by fever, anorexia, and redness of nasal mucous membrane, with abundant nasal secretion and engorgement of the glands at the seat of inoculation. The daily examination of the blood showed an increased number of leucocytes, and on the third day were noted little rounded distinct granules adherent to the white globules: these had disappeared on the sixth day. In eight days the animals were well, and seven days later inoculation with blood taken from a case of confluent scarlatina produced no result. Again, twelve children who had never had scarlet fever were inoculated with the same nasal mucus; and in all a punctiform eruption appeared within twenty-four hours at the point of inoculation, accompanied with fever and enlargement of the neighbouring glands. The eruption lasted six days, and terminated in desquamation. After a few days the same children were inoculated with some drops of scarlatinal blood, with absolutely negative results.

THE PREVENTION OF LEAD-POISONING.—A new process for the manufacture of white lead is stated to be invented by Professor E. V. Gardner, and to be in action at Deptford. Its principle is that of preparing the lead in closed chambers, and further of issuing the white lead as a dry powder, or as white paint, ground and ready for the market. By this invention the workers are never brought into contact with the white lead dust, and their hands never touch the metal; while here, as in so many other cases, the abolition of a danger to the worker is associated with a direct gain to the employer—the above process being, it is alleged, both rapid and economical.—*Lancet*, 1884, vol. i. p. 79.

POISONING BY HYDROCHLORIC ACID.—Dr White, in the *Lancet* (1884, vol. i. p. 65), reports a case of fatal poisoning by two tablespoonfuls of strong "spirits of salt." The patient was a recently discharged lunatic, 54 years of age. When seen three hours after taking the above dose, the man was found collapsed, with frequent vomiting of blood and viscid material of acid reaction. He complained much of burning in the mouth, throat, and stomach, and of tenderness on pressure over the stomach, but he had no thirst, diarrhœa, or tenesmus. The treatment consisted in the administration of a solution of potash largely diluted, and, later, of lime-water and milk, with the external application of warmth and laudanum fomentations. He was restless during the night, vomited incessantly, and died next morning, seventeen hours after swallowing the acid. The appearance of the mouth was similar to that usually found in poisoning by hydrochloric acid; but the peculiarity of the case consisted in the discovery, at the post-mortem examination, of three perforations of the alimentary canal—one at the extreme lower end of the gullet, another near the pylorus, and the third about an inch from the upper end of the duodenum. The larynx, trachea, and bronchi were injected, and the upper surface of the diaphragm congested. There was also some commencing pneumonia in the base of the left lung.

POISONING BY RED PRECIPITATE.—A middle-aged woman swallowed two-pennyworth (about two drachms) of red precipitate. The symptoms complained of were epigastric pain of a burning character, and an indefinite feeling of pain diffused over the abdomen. Salt and water, given by her husband, caused vomiting, which was maintained by an emetic dose of sulphate of zinc administered by Mr Kennedy, Gorton, who reports the case. Further treatment consisted in giving raw eggs and magnesia in milk, with a diet of egg in milk, etc. On the following day the patient had hæmatemesis and the passage of florid blood *per anum*, but after this the discomfort gradually disappeared, and in five days convalescence was complete.—*British Medical Journal*, 1884, vol. i. p. 57.

Note.—Poisoning by this substance—red oxide of mercury—is of sufficiently rare occurrence to warrant notice being taken of the above case. The early emesis may probably explain the absence of narcotism and salivation, which were seen in at least one other case of poisoning by red precipitate.

ANTIDOTES TO PHOSPHORUS.—Professor C. W. Wright of Louisville (*Druggists' Circular and Chemical Gazette*) attributes the poisonous action of phosphorus to its phosphorescence, the destruction of which, he says, makes phosphorus innocuous. He attributes the phosphorescence to the ozone which phosphorus has the property of developing out of the oxygen of the air; and any agent which will destroy or temporarily suspend this property is the antidote to phosphorus poisoning. Among the substances which act in this manner are spirits of turpentine and sweet oil, or any liquid fat. A mixture of 10 to 15 drops of the former with an ounce or two of the latter will, he says, prove an efficient antidote to elementary phosphorus in any substance, such as the tips of matches or certain rat-poisons with which it may be incorporated. Other volatile oils, such as oil of sassafras, may be employed when turpentine is not at hand.—*Therapeutic Gazette*, December 1883, p. 521.

Note.—This theory is certainly startling. Hitherto it has been believed that oils dissolved phosphorus, and, by thus favouring its absorption, increased its poisonous properties. Oil of turpentine is certainly antagonistic to phosphorus, as was first pointed out by Lethby, and as experiment and practice have alike confirmed; but, according to Höhler and Schimpf, the commercial oil is the most effective, and it is very rich in ozone. According to them, also, no free phosphorus has been found in the bodies of animals in whom a poisonous dose of phosphorus has been antagonized by a dose of commercial oil of turpentine—a fact which shows that the functions of phosphorus are not simply kept in abeyance by the turpentine.

ARSENICAL GLASS AS A SOURCE OF ERROR IN TESTING FOR ARSENIC.—In commenting on a paper by W. Lenz, "On the Purification of Hydrosulphuric Acid Gas for Chemico-Legal Investigations," published in the *Zeitsch. für Anal. Chem.*, Dr W. Fresenius remarks that whilst in toxicological researches the reagents have been always carefully tested for arsenic, no one has suspected that the glass apparatus employed, if containing arsenic, might give occasion to errors. Such a result, however, appears, according to the author's observations, perfectly possible; and his attention was first drawn to the subject when testing a precipitate formed by sulphuretted hydrogen for arsenic by Fresenius and Babo's process. After detailing experiments on this subject, the author goes on to advise that where this process is to be employed the substance, with the reduction mixture, should be placed in a porcelain boat, introduced into a tube of glass as free as possible from arsenic, and cautiously dried in the current of carbon dioxide before applying a high temperature. The presence of arsenic in the glass is not likely to lead to error in the Marsh process, as it would be detected in the preliminary examination before adding the suspected substance. The author finally remarks that non-arsenical glass was formerly a common article of commerce, though it cannot now be procured.—*Chemical News*, quoted in *New Remedies*, December 1883, p. 364.

Note.—Nor is the presence of arsenic in glass likely to invalidate the result of Renisch's process, since the author's experiments show that whilst with alkaline liquids the extraction of arsenic from glass is possible, it is not to be apprehended where the solution is acid.

PERISCOPE OF OPHTHALMOLOGY.

By George A. Berry, M.B.

The Etiology of Inflammation of the Cellular Tissue of the Orbit.—Pagenstecher (*Archiv f. Augenh.*, xiii. 2) gives four cases, two of which have come under his individual observation, of inflammation of the retrobulbar cellular tissue, all of which were evidently caused by a spread of inflammatory action from one or more teeth. The first case, which is the most interesting, illustrates very forcibly the necessity for making a thorough examination of the teeth in these cases. A boy aged 9, when first seen by Pagenstecher on the 8th September 1879, exhibited a most marked proptosis of the left eye, the displacement amounting to 1½ fingerbreadths, and producing so much restriction in the movements of the eye as to give rise to diplopia in all directions. There had been no accident previous to the onset of the inflammation, but the patient had suffered severely from toothache on the 5th of September, besides having been unable for some weeks past to chew on the left side. He saw a dentist on the following day (6th September), who pronounced the tooth to be sound from which the pain appeared to proceed, and gave it as his opinion that a molar tooth about to pierce the gum further back was the real cause of the pain. The same day, however, the pain continued even more severely, and the lids began to swell, and during the night the protrusion of the eye took place, accompanied by excessive pain and fever. Warm poultices were applied, and gave so much relief that on the 8th September the toothache had subsided and the pain in the eye was much less severe. An ophthalmoscopic examination showed nothing abnormal, and the patient was able to read Jg. 1. On the 9th, 10th, and 11th September the swelling and protrusion diminished slightly, but on the 13th there was a recurrence more severe than before, and accompanied by diminution of visual acuity (Jg. 14 being the smallest type read). Pagenstecher then recommended the extraction of the tooth, which was performed by the dentist very unwillingly, as he still pronounced it to be sound. The tooth was extracted in the evening, and the following morning the eye symptoms had improved astonishingly. An examination of the tooth showed slight but distinct periostitis of the fangs. Two days later a circumscribed tumour could be felt in the orbit, which, on being removed on the 19th, discharged a moderate amount of matter. Three years later the patient was again seen, and was found to have normal vision. The back molar which was supposed by the dentist to be the cause of the pain had not yet made its appearance!

The Electric Light in Ocular Surgery.—Wecker (*Annales d'Oculistique*, vol. xc. p. 186) recommends the use of a small electric lamp for oblique illumination of the eye during operation.

The lamp is the so-called photophore of Trouvé, and consists of a small incandescent lamp in the middle of a cylinder, at the one end of which is a reflector and at the other a convex lens. The whole size is about 2 × 1½ inches, and the parallel beam of light, which can be easily directed on the eye, is of great steadiness and brilliancy. (The lamp is in use at Moorfields Hospital.)

ADVANCEMENT OF TENON'S CAPSULE FOR THE CURE OF STRABISMUS.—Instead of tenotomizing the contracted muscle in cases of squint, Wecker has lately drawn forward the capsule surrounding the antagonist, his object being to advance the insertions of the muscle into the capsule, the position of which insertions greatly determine the physiological action of the muscle. He expresses himself completely satisfied with the result of the operation, which he performs as follows:—A portion of the conjunctiva, 5 mm. broad and 10 mm. in length, is excised just over the tendon of the muscle. The conjunctiva then retracts forcibly and lays a considerable portion of the capsule bare on either side of the muscle. The capsule is then incised near the insertion of the tendon, and disengaged from it both laterally and below. The disengaged capsule is then drawn forward and maintained in its new position by two sutures placed near to the superior and inferior margins of the cornea. The amount of effect to be produced can be regulated by the amount of capsule included in the suture, as well as the degree of disengagement effected.—*Annales d'Oculistique*, vol. xc. p. 189.

CASE OF UNILATERAL CATARACT WITH OSSEOUS DISEASE OF THE SAME SIDE.—There is good reason to believe that some forms of congenital cataract are connected with rickets. The condition of the canine teeth connected with many cases of lamellar cataract, and first described by Horner, is an evidence of this connexion. Heuse (*Centralblatt f. Augenh.*, December 1883) has observed three cases of unilateral cataract in children who have exhibited rachitic disease on the same side as the cataract. In the case now published, a boy four years of age, there was a large rachitic lump on the forehead at the same side. He had previously suffered from rickets of the thoracic wall of that side, which had got well. The case is interesting as indicating the etiology in some cases where the traces of a pre-existing bone affection of that nature may not be so evident.

A NEW OBJECTIVE METHOD OF DETERMINING THE REFRACTION OF THE EYE.—The ordinary way of determining the refraction by means of the direct ophthalmoscopic images is fairly satisfactory. When once acquired, and with the control of retinoscopy, the objective measurement can be effected with quite sufficient practical accuracy. Burchardt (*Centralblatt f. Augenh.*, December 1883), in recommending another direct image method, lays no claim for it as practically superior to the ordinary direct one. The rays from a lamp or other source of light placed at the focus of a convex lens illuminate by a parallel beam of light a semi-transparent screen on which are painted letters. A certain number of the rays which diverge from every point on this screen are refracted by a convex lens, and meet a plane ophthalmoscopic mirror held at a constant distance from the eye by means of a simple device, and to which the observer, whose eye is placed behind the hole in the centre, can give the necessary position for reflecting the light into the eye. He then can see with more or less distinctness an image of the letters on the screen, and it is evident that by altering the position of the screen the rays cast into the eye may be given any degree of convergence or divergence desired; and further, that by a suitable choice of lens (the ones used by Burchardt have foci of 10 and 20 ctm.), the distance through which the screen has to be moved to effect these changes is not great, and may be moved along a scale, that can be graduated into dioptres of myopia and hypermetropia. This principle, if as practical as its author supposes, seems to be well adapted for estimating the total amount of astigmatism as compared with the amount of corneal astigmatism obtained by keratoscopy.

GLAUCOMA TREATED BY THE FORCIBLE TEARING OF THE EXTERNAL NASAL NERVE.—Badal, encouraged by the cure of a case of ozæna associated with violent neuralgia of the upper and middle branches of the fifth, which followed a tearing of the nasal nerve, has for the last year treated all cases of glaucoma, in which operative interference seemed at all advisable, in the same way. The theory which led him to adopt this novel treatment is that "the increased tension is manifestly the result of a breach of equilibrium between the secretion and elimination of the intra-ocular fluids: we should therefore be able to remedy this by acting on the vaso-motor or secretory functions, and we may be permitted to suppose, from analogy with the above case, that the elongation of the nasal nerve in preference to any other would produce the desired result;" and he adds that "this hypothesis has been confirmed by clinical experience." He prefers tearing the nerve, as this can be done very easily by merely cutting down in its vicinity, and seizing the tissues round about and including it with a hook, which is then made tear its way out, the bleeding from the accompanying artery being so slight as to be of no consequence. When this operation is not effectual, Badal thinks the next thing to do is to stretch one of the other branches of the fifth. He observes that "whether the surgical trauma acts on the terminations of the ciliary nerves, as in sclerotomy, iridectomy, or Hancock's operation, or on the nerve trunk, as in stretching, the effect will be the same. But we may imagine that the chances of cure would depend to a certain extent on the number of nerve fibres involved." In this way he explains the superiority of iridectomy over a limited sclerotomy, and of the tearing of the nasal nerve over iridectomy. The cutaneous anæsthesia caused by the rupture of the nerve is too limited in extent to be of any importance. The results obtained are as follows:—In 25 cases of glaucoma, not selected, but taken just as they came, the tearing of the nasal nerve produced diminution of tension in 19. In 20 of the cases in which the glaucoma was acute or sub-acute the operation caused very speedily, and sometimes almost instantaneously, a cessation of the pain. In 4 of these cases iridectomy had aggravated the condition. In 4 cases a previous iridectomy, and in 6 a previous sclerotomy, had failed. Of 2 cases of acute glaucoma the cure was rapid and complete in 1, while in the other the vision did not return. In 6 other cases in which the vision had been for long lost or almost abolished, 3 recovered sufficient acuity to be able to guide themselves (!). Finally, in the cases in which the operation advocated failed, a subsequent sclerotomy or iridectomy was no more successful; and, further, the tearing of the nerve never produced any aggravation in the existing condition, even when unsuccessful in effecting an amelioration. Badal recommends his operation for all cases of glaucoma, without exception, as the one most likely to have a favourable influence on the disease; and only in very acute cases, where there is a very urgent indication to bring about a diminution in the intra-ocular tension, does he admit the advisability of combining it with any other procedure. Even this should be no more than paracentesis. From the above description it is clear that, should the results obtained by others equal those of Badal, the operation of tearing out the nasal nerve will not be long in being adopted as the principal cure for glaucoma.—*Annales d'Oculistique*, xc.

INTRA-UTERINE INTERSTITIAL KERATITIS.—Baus (*Klin. Monatsbl. f. Augenh.*, Dec.) records a case of a child, 7 months old, which was born with perfectly white eyes, and was only taken to see him on account of a gradual improvement which had taken place since birth. The parents were both healthy country people. The description of the case leaves no doubt as to its being one of interstitial keratitis, and the prognosis therefore good. The left had cleared considerably, and permitted of the perception of movement of large bodies; the right had good perception of light, but the opacity still too dense to allow of the formation of any definite image on the retina.

ON THE SENSATIONS PRODUCED BY MECHANICAL IRRITATION OF THE OPTIC NERVE TRUNK.—With reference to the question as to whether mechanical irritation of the trunk of the optic nerve produced a sensation of light or not, the following investigations by Landesberg (*Klin. Monatsbl. f. Augenh.*, Jan.) are not without interest. In 17 cases in which enucleation had just been performed, the stump of the nerve was seized and pinched with a pair of forceps, and the patient asked what he experienced. 16 of the 17 declared that they were pained, and this was confirmed by their symptoms; only 1 spontaneously said that at the moment of the pressure he was conscious of a flash of light confined to the field of the enucleated eye. The patients were next told to notice if they had any sensation of light besides the pain. By 4 of the cases a sensation of light to the side of the enucleated eye was described as a lightning flash, with coloured zigzag margins; 13 cases denied experiencing any light sensation. Further experiments brought out the sensation in 4 more; 8 of the 17, however, were in no way made conscious of a specific sensation.

Part Fifth.

MEDICAL NEWS.

Royal Colleges of Physicians and Surgeons, Edinburgh.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sittings held on 31st January 1884 and subsequent days, and were admitted L.R.C.P. Ed. and L.R.C.S. Ed. :—John Struthers Stewart, Edinburgh; C. Morris, Edinburgh; Charles Jenkins Lumpkin, London; Richard Nason Gaggin, Edinburgh; William Cæsar Hamilton, Edinburgh; William J. M'Farland, Co. Tyrone, Ireland; John William Irvine, Co. Down, Ireland; Allen Adair Dighton, Gloucester; Joseph Bowerman Drew, Thorney Fen, near Peterborough; John Hanson, W. Kensington; Augustus William Dalby, Torquay; Joseph George Garibaldi Corkhill, Liverpool; Robert Knox Carleton Graham M'Corkill, Farnham, Canada; Archibald Harper, Mishina, Rockcorry; Lewis D'Almeida, Edinburgh; Thomas Adam Beresford Kane, Co. Armagh, Ireland; Maurice Stack Cussen, Tralee, Co. Kerry; William Holberton Square, S. Devon; Charles H. Barkley, Worcester; A. N. Barnley, Brierley Hill, Staffs.; Ernest James Flynn, Dublin; Herbert Longmore Grant Chevers, London; Hamilton Edward Leonard Earle, Lymington; Oliver Grenville Taaffe, Edinburgh: William R. Condon, Edinburgh; William F. Hamilton, Co. Derry, Ireland; Richard Ferdinand O'Farrell, Co. Galway, Ireland; Ernest Howard Goode, Birmingham; Samuel Oliver Eades, Cannanore, India; Charles Riedy, Edinburgh; Edward Hodges Goggin Phillips, Dublin; John Henry M'Auley, Dublin; James Orr, Belfast; John Joseph Hanly, M.A., Brighton; Simon Vincent Daly, Monkstown, Cork, Ireland; Alexander James Griffith, Co. Clare, Ireland; John M'Michael, King's Co., Ireland; Donald Alexander MacCrimmon, Edinburgh; Edward Flood M'Gragh, Cork; Henry George Thomasz, Edinburgh; Thomas Francis Hanly, Brighton; William Gibb, Dundee; Richard Fitzmaurice, Perthshire; William Robinson, Co. Derry, Ireland; David Mathewson Nairn, Dundee; Joseph Amy, Glasgow; Alexander Willox M'Fadyen, Aberdeen.

Royal College of Surgeons, Edinburgh.—The following gentlemen passed their final examination for the qualification in Surgery at the sittings held on 31st January 1884 and subsequent days, and were admitted L.R.C.S. Ed. :—George Lawbridge Baker, London; Edwin Harold Brown, Northampton; Henry Edwin Newman Dobie, Richmond, Surrey; James Cook, M.D., Belfast.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination for the qualification in Medicine at the sittings held on 9th February 1884, and were admitted L.R.C.P., Ed. :—Radha Gobend Kar, Edinburgh; Alfred Naylor Darlington, Shrewbury; Matthew John Beevor Anderson, London; Henry Holloway Ballachey, Glasgow; Alfred de Winton, Gloucester; Adam Galbraith Elliott, Bayfield, Ontario; Alfred Farncomb, Newcastle, Ontario; George James Charlesworth, Ingersoll, Ontario; George Millhouse, Scarborough; Edward Robert Drummond Fasken, London; Alfred Lawrence, London; Wm. John Nicholls, St Ives, Hants; Arthur Atwool Cottew, Kingston, Ireland; John Lister Wright, London.

The Medico-Legal Society of Philadelphia.—At the inauguration of this society Dr Reese, Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania, delivered the opening address. In doing so he took the opportunity of sketching the history of medical jurisprudence in the United States, and pointed out to his audience the necessity for such a society and the benefits likely to accrue from the discussion of questions appertaining to the department of state medicine.

LIST OF CANDIDATES who were successful for appointments as Surgeons in Her Majesty's British Medical Service at the competitive examination in London on 4th February 1884.

No.	Name.	Marks.	No.	Name.	Marks.
1.	Barefoot, J. R.,	2440	11.	Doyle, J. I. P.,	2145
2.	Clement, R. H.,	2420	12.	Manders, N.,	2120
3.	Hunter, G. D.,	2335	13.	Colledge, L. R.,	2100
4.	Beevor, W. C.,	2300	14.	Freyer, S. F.,	2075
5.	Anderson, L. E.,	2275	15.	Birt, C.,	2070
6.	Russell, G. B.,	2250	16.	Henderson, R. S. F.,	2020
7.	Spence, A. E. C.,	2220	17.	Mitchell, H.,	2000
8.	Mallins, J. R.,	2200	18.	Butterworth, S.,	1990
9.	M'Cormack, R. J.,	2180	19.	Holmes, C. J.,	1930
10.	Thompson, H. N.,	2169	20.	Lane, J. R.,	1920

We publish the following *verbatim:*—The Berlin Policlinic, Berlin, Liegelstrasse 3, has celebrated last November its first anniversary day. During this time more than two hundred medical men, amongst them many strangers, have visited the Berlin Policlinic, in which, in this moment, the following specialities of medicine are taught:—1. Ophthalmology. 2. Operative Surgery of the Eye, and Practical Instruction in the Use of the Speculum Oculi. 3. Neuropathology and Electrotherapeutics. 4. Laryngoscopy and Œsophagoscopy. 5. Otology. 6. Rhinology. 7. Dermatology. 8. Syphilology. 9. Histology. 10. Forensic Chemistry. These specialities are taught in monthly courses, which begin every first working day of the month, and last every day during the whole month, except Sundays and holidays. To the Berlin Policlinic two laboratories, one for chemistry and one for histology, are attached. In both, medical men find ample opportunity for executing researches on scientific objects. The first January, a third laboratory—destined for working in bacterioscopy—will be opened. At the same time a monthly course of bacterioscopy will join the other courses.

CHILDREN'S PARTIES IN WINTER.—Dr Cullimore, of the North-West London Hospital, has written to the *Evening Standard* what we conceive to be a very sensible letter, pointing out the perils which beset children's parties in winter. The subject is one which may well receive the thoughtful attention of parents and all who are solicitous for the welfare of the young. Dr Cullimore's principal objections, which are based on physical grounds chiefly, are urged for the benefit of children under seven years of age. We would extend the prohibition to twelve, or even a little later. It is impossible not to recognise that the so-called "pleasure" of a children's party involves a very large measure of excitement, both before and after the event; so that, apart from the exposure to the chances of "chill" and improper food and drink on the occasion, there is an amount of wear and tear and waste attending these parties which ought to be estimated, and the estimate can scarcely be a low one. It may seem ungracious to strive to put a limit on the pleasures of the young, but it must not be forgotten that early youth is the period of growth and development, and that anything and everything that causes special waste of organized material, without a compensatory stimulus to nutrition, ought to be avoided. Dr Cullimore has dealt with the general effects on health, and he has not exaggerated the evils that sometimes ensue, and are always likely to be entailed, by this form of juvenile amusement. We turn from these to the mental and nerve injuries inflicted on the growing organism. They are certainly not to be disregarded. A perfect storm of excitement rages in the little brain from the moment the invitation has been received, and the affair is talked about in the nursery until after the evening. Sleep is disturbed by dreams, or, in some cases, prevented by thinking of the occasion, and afterwards the excitement does not subside until days have elapsed, perhaps not before another invitation is received. Not only in winter, but at all seasons, we think the amusements of young children ought to be simple, unexciting, and as free as possible from the characteristics of the "pleasures" of later years. As a matter of fact, "children's parties" are in no way necessary to the happiness of child life.—*Lancet*, 26th January 1884.

IN no form of diarrhœa—I speak from personal observation and experience—is alcohol likely to be of any use whatever; and it would be, to us, with our present knowledge, matter for surprise how it should have acquired its widespread reputation, were it not that it is looked upon by the public as a panacea for almost every abnormal condition under the sun. I verily believe that, in the past, the death-rate from diarrhœa has been increased by well-meant, but injudicious, treatment with alcohol. It cannot be too widely known, amongst the public, that diarrhœa is frequently but a symptom of another disease, and that the blind attempt to check it may make the latter more complicated, and therefore more difficult of cure, than before. A vast amount of human and animal life is sacrificed annually to this disorder; it stands highest amongst the causes that produce the high mortality amongst the children of European soldiers in India:—and I venture to affirm, after long experience, that much of this mortality might, *cæteris paribus*, be lessened if—I trust I am not presumptuous in expressing such an opinion —less reliance were placed upon medicines and more upon diet,—alcoholic remedies of every description being withheld altogether. Where stimulants are necessary, ether and ammonia may well take their place.—From a paper on "Diarrhœa" by Dr C. R. Frances, formerly Principal of, and Professor of Medicine in, the Medical College, Calcutta.—*Medical Temperance Journal.*

OBITUARY.

PROFESSOR JOHN HUTTON BALFOUR, F.R.S.

On the 11th February this distinguished botanist, teacher, and philanthropist passed away in his seventy-sixth year, and to many of the older men amongst us his death closes a chapter of much interest in our student days, while the general public of Edinburgh would do well to remember one who laboured incessantly for them and for our local institutions, whether scientific or connected with the general welfare of the community. It is understood that an extended memoir will soon appear, and we shall here only remark on a few salient points of his life and character.

Our departed friend was born in Edinburgh in 1808, and most of his life was spent in the Scottish metropolis. His father was a well-known and respected citizen, who had been in early life a surgeon in the army, and by whose instructions, to some extent, a taste for botany was instilled into the future professor. He received his early education under Dr Carson at the High School. He then followed the Arts curriculum at the University of Edinburgh, going subsequently for one year to St Andrews, where he was the pupil of Chalmers. He then returned to Edinburgh, and for a time attended the Divinity classes, it having been his father's wish that he should enter the church; but ere long he devoted himself to the study of medicine.

He became a member of the College of Surgeons in 1831, and took his degree in 1832. In 1834 he became assistant to Sir G. Ballingall, whose apprentice he had been, and six years were passed in medical practice.

In 1836 a party of seventeen botanical friends met at his house in Dundas Street, including Graham, Greville, Edward Forbes, P. Neill, W. H. Campbell, the Macnabs, and the Botanical Society was then instituted. Dr Balfour was practically the founder, and always took the deepest interest in its progress.

In 1840 he delivered his first lecture on botany, in Surgeon Square, and in 1841 he was appointed to the Chair of Botany in the University of Glasgow, vacant by the translation of Sir W. Hooker to the Royal Gardens at Kew. In 1845 his old teacher, Professor Graham, died, and Balfour was elected to the Chair in the University of Edinburgh by the Town Council. Here he laboured for thirty-four years, and had nearly 8000 students under his tuition. He began with 50 pupils in 1840, 160 in 1845, and in 1878 the number had risen to about 400.

His earnest devotion to the science and his inexhaustible energy during this long period bore abundant fruit. Great improvements took place in the Botanical Garden; among these were the incorporation of the Caledonian Horticultural Society's Experimental Garden, the erection of the palm-house, the foundation of the economic museum, and the formation of the herbarium and library; and though, from his retirement from the chair on account of ill health, he did not benefit by the admirable new class-room and laboratory now furnished by H.M. Board of Works, yet he kept the attainment of these steadily in view for many years, and never lost an opportunity of urging their necessity upon the Government.

In addition to his duties as Professor of Botany and Regius Keeper of the Botanical Garden, Dr Balfour was for nearly thirty years Dean of the Medical Faculty in the University, and upwards of ten years Secretary, and afterwards one of the Vice-Presidents, of the Royal Society of Edinburgh; he was Vice-President of the Medical Missionary Society, Manager of the Royal Infirmary and Royal Asylum, Morningside, and he bestowed much labour on these and kindred institutions in the city.

In literary work Dr Balfour was for many years joint editor of the *Annals of Natural History* with Sir W. Jardine and Professor Babington of Cambridge, and was also editor of the *Edinburgh New Philosophical Journal.*

Among the papers written by him which are most interesting to medical practitioners are remarks on the ipecacuan and assafœtida plants, the ordeal bean plant of Calabar (*Physostigma venenosum*), and *Rheum nobile* from Sikkim. Besides the courses of lectures delivered in the University, Dr Balfour did much to extend the study of botany among all classes by the publication of text-books suited for primary and secondary schools and for institutions for higher education. These books have had a large sale.

Dr Balfour belonged to a class of botanists now comparatively rare, viz., those who energetically devote themselves to the prosecution of field botany and the study of the native flora,—the modern tendency being much more in the direction of laboratory work, either anatomical or physiological; but at the same time he was the first in Scotland to introduce the systematic use of the microscope, which has since made so much progress.

His old students will ever retain an affectionate remembrance of the genial enthusiasm which invariably characterized him during many a botanical excursion, where he shone not more as an able guide and instructor than as a kind and warm-hearted friend. His unbounded hospitality to strangers and students was remarkable, and it was his practice every fortnight to have a meeting for students in his own house for the study of God's Word.

Amongst the vast number of his pupils dispersed over the globe, who were fired with his enthusiasm, and who have attained important positions, may be mentioned Professor Dickson, his successor in the Chair; the late Sir Wyville Thomson; the late Dr T. Anderson of Calcutta; Dr Carruthers, of the British Museum; Professor Lawson, Dalhousie College, Canada; Sir J. Kirk, Zanzibar; Sir G. Birdwood and Sir Joseph Fayrer, India Office. With these and many others he maintained a constant correspondence whilst he was engaged in the multifarious duties already referred to.

The writer of these lines has abundant cause to remember with gratitude the many acts of kindness he thus received when in a distant country.

Professor Balfour married, in 1848, a daughter of J. Bayley, Esq., of Manuel, and she died in 1879, leaving four sons and four daughters. The second son, Dr J. Bayley Balfour, was elected Professor of Botany in Glasgow in 1879, and received the appointment of Sherardian Professor in Oxford a few days before his father's death.

J. G. MACVICAR, D.D., LL.D., MOFFAT.

Died Tuesday, 12th February 1884.

We cannot allow the death of this revered and distinguished clergyman to pass without notice in our pages; for, though not a medical man, the late Dr Macvicar was a scientific writer of great originality and industry, and this Journal has been the medium more than once in which he communicated his views on various subjects, such as—"On the Hepatic System in Animals;" "On the Structural Relation between Urea and Uric Acid;" "On the Normal Products of Hepatic Action;" "On the Degeneration of Tissue;" "On the Motions of the Heart, the Circulation of the Blood, and the Delivery of the Nutritive Part of the Tissues, viewed Morphologically;" "On the Cause of the Prophylactic and Therapeutic Value of Table Salt, etc.;" "On Anæsthesia and Anæsthetics."

He was fond of many branches of scientific study, and in his early days attended several of the medical classes in the University and extra-mural school of Edinburgh.

He will be much missed in his own county, where he was not only a laborious parish clergyman, but a leader in all good work.

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Part First.

ORIGINAL COMMUNICATIONS.

I.—CATHETER FEVER.

By Sir **ANDREW CLARK**, Bart., M.D., LL.D., &c., London.

(*Read before the Medico-Chirurgical Society of Edinburgh, 27th February* 1884.)

THE *President* (Dr Littlejohn), in calling on Sir Andrew Clark to deliver his address on Catheter Fever, said: Gentlemen,—You all know the object of our meeting to-night. It is a special meeting of the Society to hear a paper by Sir Andrew Clark, and I am happy to inform you that he has a perfect right to come to Edinburgh at any time and read a paper here, because he is one of our corresponding members of a pretty old date. I am sure you will give a hearty welcome to Sir Andrew Clark. I will not take up your time further, but will call on him to read the paper which he has kindly agreed to do.

Sir Andrew Clark said: Mr President and Gentlemen,—In rising to address you upon this occasion, there come between me and the immediate object of our meeting the recollections of my own academic youth. They force themselves upon my mind, and they stir up therein emotions which struggle for utterance, and which cannot, and perhaps ought not to be wholly repressed. For the better part of a third of a century I have been a practitioner of medicine; and when, standing here, I look back over those long years of difficult, anxious, responsible, and sometimes even perilous toil, I see with a clearer, a fuller, and a juster view than ever before the magnitude of my indebtedness to the great medical school of the ancient city in which to-night we are assembled. Those who know me and labour with me in the daily work of my life know, alas! much better than I can know, the imperfections, the failures, the errors, which have marked it; and in all such respects I can say with unaffected sincerity that no one can think of me more humbly than I can think of myself. On the other hand, no one can know, as I know, in struggling to make that work better than it is, the spirit by which I have been animated and sustained, the examples which I have striven to follow, and the principles which have regulated all my work in the exercise urinary fever, and to ask for further information concerning it, the surgeons, like my quaint old lady, fell vigorously upon me, and by means of denials and accusations, reproofs and warnings, they at once resented and punished my interference.

Now, I think it is almost a truism to say that the introduction of a catheter into the urethra, or any like operation, is occasionally followed by constitutional disturbance—on one occasion slight, and on another occasion severe, which sometimes ends in recovery and sometimes ends in death. Now, it is alleged, and this is the point of importance—that in all such cases ending fatally, death is due to renal disease which had existed before the use of the catheter, and which in the end leads to uræmia. In fact, this is the crucial statement of the whole discussion which has taken place on this question. May I repeat it? First, it is admitted that the introduction of the catheter is occasionally followed by severe constitutional disturbance, that occasionally this disturbance ends in recovery, but that sometimes it ends in death; and then—and here, I repeat, is the crucial question of the whole discussion—it is alleged that if it ends in death, renal disease existed before the cathether was introduced, and that death is caused by uræmia, in consequence of extension of the renal disease. Now, I demur to this conclusion, and I traverse its accuracy. I contend that in persons apparently healthy catheterism is sometimes followed by fever, neither distinctly uræmic nor distinctly pyæmic; that this fever sometimes ends in death, and that in *such* cases the autopsy reveals no definite, visible, structural lesion adequate to account for death. I have used two terms here which I must explain. I have used the term "apparently healthy," and also "persons being in health but with a low density of urine." I have said "apparently healthy," and this phrase has been taken exception to, but I am bound to resist the exception. I contend that if a man is brought before me whose functions, as far as I can ascertain them by modern means of research, are sound, who eats and digests well, whose urine is of normal constitution, who has no subjective nor objective signs of disease, I am bound to say that such a man is apparently healthy, and any official in a life assurance office—provided that the family was healthy—would accept such a life as good. But the exception is to my using the word "apparently." I cannot say positively that *any* man is healthy, but I can say that he is "apparently healthy;" and what I understand by that is, that so far as any means that we possess for detecting disease can help me, there is in the case in question no evidence of disease existing or threatened. Then I have said "with a low density of urine." Thirty years ago I stated in the first volume of the London Hospital Reports, that it was not necessary to have albumen or casts in the urine to indicate renal disease; but that, if a man habitually passed a low density without an increase of quantity of urine, it was quite sufficient to infer from that fact alone that his kidneys were not

Before Interference.

Pathogenic Hypothesis on Nature of Troubles following.

- Kidneys.
  - Healthy. **Phillips, Marx, Banks.**
    - Neurosis. **Marx, Röser, Fayrer, Banks, Cameron.**
      - Sudden Nervous Disorder. . . .
      - Slow Nervous Disorder.
        - General Dystrophy. .
        - Local or Sympathetic or R flex Dystrophy. .
    - Toxhemia. **Marx, Velpeau, Sedillot, Holt, Harrison, Sir H. Thompson.**
      - Non-renal, direct, by addition (Ichoremia). **Velpeau, Sedillot, Harrison, Guyon, etc.**
      - Renal, indirect, by accumulation (Uræmia). **Sir H. Thompson, Malherbe, Guyon, etc.**
        - (1.) Extension of Inflamm tion by continuity, or chemical changes in urin **Rayer, Hamilton, Marcus Beck, Cameron.**
        - (2.) Change of Pressure urinary reservoirs, leadi to changes in renal a general circulation. **Sir H. Thompson, Ogilvie Will, Cameron.**
        - (3.) Nervous reflex * action. **Marcus Beck, Cameron.**
          - Vaso-motor (Inhibitio or Paralysi
          - Secretory (I hibition Paralysis).
  - Diseased.
    - Neurosis.
    - Toxhemia.
      - . . . . As above

A larger experience requires this statement to be modi- I should like to put in place of it that a man, in other ts healthy, and passing habitually only an average quantity ne of a lower density than 1012, has not, in the proper sense term, *diseased*, but *inadequate* kidneys. He has what I have renal inadequacy. A man may have a skin which does not ce a proper sweat, and yet, if you were to examine that skin ry available means for the presence or absence of disease, ould be unable to detect its presence. So the kidney may dequate or unable to produce a healthy urine, and yet, when ned by a microscope, or in any other manner which the ce of modern science has placed at our disposal, you may able to detect any structural lesion.

w, after these preliminary observations, we are brought o face again with this question of what is called Catheter ; and its exact place among the other effects of catheterism e seen on reference to the table I have placed on the wall. e two tables—one which is capable of being shown on the and another which, being the crowded table of a busy man, is ly fit for representation on the walls, but which may be use- the course of this discussion, because it contains not only acts shown on the table, but it contains the references to various authors who have written on the subject, and to the s in this book[1] in which the exact quotations will be found; I will take the opportunity, Mr President, of placing this and table in your hands, to use it as you may think proper. w, a glance at the table hung upon the wall will show you er than any lengthened description which I can give you the t position of what has been named for the moment “catheter r.”

et us now suppose that the operation of catheterism has been ormed upon a person whose kidneys are assumed to be healthy. en injurious effects follow, they are first visible in the nervous tem, and there they are suddenly or slowly developed. Of effects which are sudden I may mention faintness, apyretic ors, epileptiform seizures, suppression of urine, and coma. And ll such effects flowing directly from disturbance of the nervous tem, it may be said that they bring about other effects which rt a toxic effect upon the organism. Of the effects, which are w, of catheterism upon the nervous system, the first and most iking is a sort of general dystrophy manifested by fever, the ond is a disturbance of the nutrition and function of the dneys which are associated by community of work with the ethra and bladder, and the third is the appearance of purulent arthropathies. When, as is often the case, the disturbance of the nervous system and the disordered metabolism consequent upon it are added to and aggravated by septic absorption, chemical or vital, then in lighter conditions we have septicæmia, and in graver ones ordinary purulent infection. Now, setting aside mere shock at the one extreme of this scale and pyæmia at the other, we have printed red in the table the conditions embraced by the term Catheter Fever. And of this it may be said that it pursues an irregularly remittent course; that it is not, as we now understand these fevers, either distinctly uræmic or pyæmic; that it lasts from two or three days to two or three weeks; that it is sometimes fatal; and that an autopsy reveals no definite visible structural lesion adequate to account for death.

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[1] The book to which Sir Andrew Clark refers is in manuscript, and by his kindness we have been enabled to take from it the references to authorities found in the table.—ED. *Edin. Med. Jour.*

The second and concluding assumption made in the table is that this catheter fever may arise in persons whose kidneys are diseased; and that death, when it occurs in such cases, is not necessarily or usually due to the previously existing renal disease, itself inadequate to account for a fatal issue, but to certain superadded and for the most part dynamic states brought about by the use of the catheter. The question, however, more immediately before us is the occurrence after catheterism of a fever in which the kidneys are alleged to be free from disease before the operation. Does such a fever really exist? Is it true, or (not to use a term involving moral considerations), is it accurate to say that in persons of ordinary health the use of the catheter is sometimes followed by fever, and that when this fever has a fatal issue the autopsy reveals no visible structural lesion adequate to account for death?

I conclude, for my own part, that such a fever does exist, and the grounds for this conclusion are these:—*First* of all, the admissions, setting aside diversities of interpretation, of almost all —not all, but almost all—authors, from Moffait in 1800 to Guyon in 1883. And it has been particularly, and I would say admirably, set forth by a person who has been strangely overlooked in this discussion, namely, Mr Banks of Liverpool, whose communication appeared, curiously enough, in the *Edinburgh Medical Journal* of 1871. He is, as I understand the matter, the only English author who has clearly recognised the existence of this fever, and he has alleged that it is quite a distinct fever from the fever of what is called pyæmia. *Secondly,* I believe in its existence from the observation and post-mortem examination of three cases of my own, and of many other cases in which, unfortunately, no post-mortem could be got. *Thirdly,* I believe in it on account of the complete recovery of some serious cases following catheterism, which would be scarcely compatible with the idea of their having had a severe interstitial nephritis. Next, from the fact that in many post-mortem records of old-standing hospital cases dying of prostatic vesical disease—for example, in 26 out of 66 recorded by Marcus Beck in the University College Hospital Records—no evidence of renal disease has been recorded. Furthermore, from the fact that in the cases where renal changes exist they are not, as proved by the examination of the urine and by a study of the general symptoms, adequate of themselves, or with the help of any other visible structural sign, to account for death. I say then, to use the mildest term that I can on such an occasion, it is at least extremely probable that this catheter fever exists. And if it does exist, how then are we to account for the allegations of certain specialists of great and undoubtedly just distinction, that in fatal cases of this fever renal disease has always existed before the use of the catheter, and is always, in fatal cases following its use, the cause of death? With not a few persons, sir, such a statement from such quarters is conclusive as to their truth. But truth, which has no creeds, certainly bends to no authorities, and in such contentions as this in which we are engaged, the appeal must be made, and always made to facts, and not to mere opinions—to reasonable probabilities, and not to particular persons. Besides, I hope it is not unreasonable to say that one may be too near a subject to see it quite accurately. Sometimes, indeed, it requires one to go a little distance in order to see a thing in its just proportions to the other things of which it forms a part. Nay, that alone is not always sufficient. Sometimes it needs an intelligent and interested bystander to set one right as to the conceptions which one forms of the things in the midst of which we are engaged. I suppose that in a battle those who are in the midst of it scarcely know the disposition of the forces or the manner in which the tide of victory is turning. It is the general and the staff—standing at a distance, having all the field in sight—who alone can determine this. Now, that in fatal cases of catheter fever the kidneys are not always diseased beforehand I conclude from the following facts:—*First,* From reported cases, to which at least a certain amount of weight must be given. *Second,* From examinations of urine made by competent persons before the entrance on catheter life. I may here pause for a moment to relate a case which, by the kindness of Mr Howard Barrett of London, I am enabled to do. The substance of it is this:—A gentleman came to Mr Barrett and consulted him for a little incontinence of urine. He examined the urine, and, being a man of a scientific turn of mind, and one of the most careful men I know, he examined it with a care and precision which are to me absolutely trustworthy, and he declared that this specimen of urine was healthy. Seeing this, he recommended some simple means to allay the irritation of the bladder, and dissuaded him from surgical interference. But Mr Barrett's advice was not followed. The gentleman consulted a surgeon, who followed the usual course of treatment in such cases by placing him upon catheter life. In a short time he suffered from catheter fever and died, and the report of the cause of his death was advanced disease of the kidneys. *Thirdly,* From examination of the urine made by myself. I am accustomed to examine the urine, and it has occurred to me, as it has to every busy physician, to have been consulted along with surgeons for maladies of this sort. I have on all such occasions—either myself or by the help of my assistant, who is a competent person, Dr Sheridan Delepine, to whose conscientious care I owe the preparation of the tables, and having been educated in Edinburgh, is therefore particularly competent—examined the urine. In many such cases we have found what I call conclusive evidence of healthy kidney—that is to say, a normal amount of urine of normal constitution—and no evidence of any constitutional state or local disease which might influence the secretion of urine. *Fourthly,* From the complete restoration to health, which in some cases follows recovery from catheter fever, a restoration which can scarcely be expected in true and considerable interstitial nephritis,—a restoration, however, which I admit might be possible in the affection which is now called interstitial nephritis, and which is a very different thing indeed from the so-called interstitial nephritis of ten years ago. It seems to me that the interstitial nephritis of these days consists in little else than in changes undergone by escaped leucocytes lying between the tubules and around the vessels. However, that is meantime beside our question. *Fifthly,* From the fact that in some cases of fatal catheter fever examined before catheterism, no evidence of renal disease, although especially sought for, could be found in the constitutional state of the patient any more than in the state of his urine.

Now, as regards the second contention, that death is due always to renal disease, and that even if the catheter fever were recovered from, the patient would die soon after in the usual way from uræmia, my experience compels me to dissent from both points. Probably most of my hearers will know that, in a certain work of the highest merit on vesical diseases, there is a paragraph which says, that in cases where death follows the use of the catheter it is certain that renal disease has existed before the use of the catheter, and that if the patient had escaped the fever which ends in death, the renal disease would have before very long terminated his life. My experience compels me to dissent from both points of this statement. It is true, no doubt, and no one has doubted, that in long-standing cases with dilated ureters and contracted kidneys death does sometimes arise from uræmia. That is true, but to state the same thing of recent cases is not true; for in recent cases neither the general symptoms nor the characters of the urine in the closing days of life resemble in any manner those of true uræmic poisoning. Hear, for example, the words of Marcus Beck, who is an advocate of what is called the nephritic view of all these fevers, but who, with the candour which becomes an honest and great inquirer, makes this admission. Mr Beck, speaking of the closing days of urinary fever, or, we may say for the moment, catheter fever, says:—"At the same time"—that is, at the same time that he asserts the existence of renal disease—"the secretion of the urine continues in fair quantity, and the patient cannot therefore be said properly to die of uræmia." And further on he adds, "As before stated, in many cases the real cause of death is not so much due to the kidneys, for the excretion of urine remains abundant to the last, but the absorption from the abscesses or from the putrid urine in the pelvis. On the other hand, the symptoms closely resemble, and, as a matter of fact, are often undistinguishable from those of septicæmia." Furthermore, it is not, I think, accurate to say that, if these patients escaped the fever they would necessarily in a short time die. I venture to say of renal disease, as I constantly say of heart disease, that the prognosis has to be re-written. The most striking illustration of this assertion that I can give you, sir, is one that occurred in the person of the wife of a distinguished Arctic voyager. Somewhere about the year 1840, Robert Christison, the great physician of this city, discovered that she had renal disease, and there was no doubt of the fact—if any doubt could attach to a diagnosis of Christison's—for it was confirmed by physicians in London and Dublin. And yet she continued to live, to work, and to work actively, and to enjoy life for over thirty years after that time. As a matter of fact, the prognosis of renal disease, as of many other organic diseases, is recorded in books by men who are beginning to get their experience, and not by men who have got their experience. The prognosis of renal disease and of heart disease is usually formed from the study of those diseases in the wards of an hospital. But any one who knows well the sick poor knows that it is only at their last extremity that they go to the hospital, and that when they enter the wards with cardiac or renal disease, and when they say they have been for a certain time ill, that is no true record of the time during which symptoms of their disease have existed, and which would have been discovered sooner if the opportunity had been offered. They go into the hospital when they cannot subsist out of the hospital any longer. And so it has come to pass that mitral disease has been stated to last from four to five years, when experienced physicians know that, without alteration of health, it may last forty. So likewise it is with renal disease. I have myself heard a distinguished teacher say that two and a half years was the duration of life of a person with chronic disease of the kidney. And yet I, who enjoy some of the fair privileges of age, can look back to the case of an alderman of London, who, after I had appointed him to die in 1868, is now living and in the enjoyment of tolerable health. Then if it be true that there is such a fever as catheter fever, and if it be true that there is in certain of these cases no visible adequate structural cause to be found for death upon the autopsy, and if, furthermore, it is true that in certain cases where the kidneys are affected the affection is not adequate to account for death, the question arises, What then is the differentia in these cases? What is that state which, without renal disease in some cases, and which superadded to it in others, occasionally after catheterism brings about death? For the moment I shall, as I have already stated, call it catheter fever. It is a clinical obviously, and, as obviously, it is not a pathological entity. What is its nature? I do not know. I can only state facts, and I can only interpret them by reasonable conjecture. It would require, sir, a greater amount of youth and a greater amount of inexperience than I could justly lay claim to, to speak with certainty upon this question. I have no doubt that some who can lay claim to these qualities would do so. I dare not do so. But so far as I may judge, I should say that there appears to be three steps or stages in the evolution of this so-called catheter fever, occasionally perhaps four. *First* of all it seems to me that there is some direct or reflex irritation of the nervous system. *Secondly*, That through that irritation, or it may possibly be independent of it, there occurs a disturbance and disorder of all the metabolic processes throughout the body, and the various organs and tissues, but, of course, more particularly in the kidney, on account of its communal relations with the urethra and bladder, which are themselves in this case the object of irritation. *Thirdly*, A septic infection, occurring or begotten, either auto-genetically or deutero-genetically begotten, inside or outside the body. *Fourthly*, And occasionally—for it is only occasionally that it occurs—I think that the sudden diminution of pressure, by the removal of a large quantity of urine from the bladder, brings about such a change in the constitution of the vascular supply and the nervous state of the bladder, ureters, and kidneys, as sets in motion all those disordered metabolic processes which lie between the nervous disturbance on one side and visible structural lesion on the other.

Now, sir, it seems to me that the difficulties of this subject—and they are greater than may even appear from this statement of them—have been unnecessarily heightened by the disproportionate attention which has been given to anatomical changes. Such disproportionate attention is not peculiar to this subject. It is perhaps one of the marks of the medical aspect of the age in which we live. And this disproportion has been, as I think, brought about and maintained by the objective character of the inquiry, which is always pleasanter to men than abstract subjects of inquiry, by the increasing facilities which have been given for such investigations, by the ease with which they may be pursued, by the comparatively moderate ability and knowledge necessary to success, and by the abiding reputation of success when success has been achieved. It is not a very uncommon thing to see a person who, in the early part of his life, has written a successful paper on an anatomical, or, properly speaking, pathological subject, and has rested upon his laurels, and thought himself entitled to sneer ever after at clinical medicine as an empirical and unworthy thing. It would almost seem sometimes that the great end of rational medicine was the mere description and explanation of structural changes. But surely, sir, this is a fatally inadequate view of scientific medicine. For structural changes, at least as far as I can read them, are all episodes, yes, and often but uninteresting and unimportant episodes, in the evolution of disease. Disease, as I see it at least, in its beginning, in its continuance, in its issues, in its endings, is dynamic. Its physical, chemical, and for a moment, if I may be pardoned, vital changes, and the interaction of such changes upon each other beyond the scrutiny of mere physical things, precede, originate, maintain, underlie, and give form, meaning, and importance to all pathological changes. The question is not what the structure teaches, but what the conditions begetting that structure mean. And here, if I mistake not very greatly, in this domain of dynamics lies the great future of physiological, pathological, and clinical discovery. But it is certain that such processes must be slow. They demand the highest faculties of the mind for the purposes of such inquiry. They require qualities rarely found together, accurate observation, a deep and wide insight, ingenuity of interrogation, a ripe sobriety of judgment, infinite patience, and complete unselfishness. The toil, obviously, of such inquiry is exceeding great, the fruit produced by each individual very small, and the return, beyond the use to others and the pleasure of the toil, utterly insignificant.

But to return from this pleasant and seductive digression. Let us assume that catheterism is sometimes a perilous operation, and that it may be followed by fever, ending sometimes in death, and furthermore assuming that one is about to deal with a middle-aged man suffering from an enlarged prostate and irritable bladder, the following problems at once present themselves for solution, and it is these problems that I now respectfully submit to your consideration. First, then, what circumstances should determine the habitual use of the catheter, and what circumstances should determine one to avoid its use? I must say that I have received communications of cases in which it appears that it is not always necessary in certain conditions, in which it is usually thought necessary, to put the patient on catheter life. Mr John Merriman, one of the most distinguished practitioners in London, communicated to me a case of which I will give the substance. He told me that he had had a patient suffering from irritability of the bladder, and a little incontinence, and that he had endeavoured to introduce a catheter, and that finding that it was followed by considerable local irritation in the shape of catarrh, and generally in the shape of a few rigors, he abstained. But the irritability continuing, and the friends becoming impatient, they called in a surgeon to consult with Mr Merriman. The surgeon proceeded with some little force to introduce a catheter. Twenty-four hours afterwards the patient had a severe rigor, and for fifteen or sixteen days he lay in a serious fever, as Mr Merriman thought, in near peril of death. At the end of that time he began to recover, and, curiously enough, not only recovered from the fever, but from his local trouble, and from that day, as far as I know, until this day both the catarrh and the irritability of the bladder have entirely ceased. So that it happens sometimes—I am afraid it does not happen very often—that in cases of irritability of the bladder and even fever, the whole of the symptoms may subside without the intervention of catheter life. Secondly, if it is resolved to place the patient on catheter life, what local and what general precautions can be taken, with any reasonable hope of averting this catheter fever; and, thirdly, and if, in spite of all these precautions, this so-called catheter fever should arise, what are the means most likely to guide the case to a successful issue? And now I will no longer trespass upon the time and patience of the Society. I commit the subject to your consideration, assured that it will receive from you a just and an adequate discussion, and believing that the issues of it will tend to the improvement of our knowledge, the better relief of suffering, and the greater safety of life.

[For the discussion which followed this address, see page 938 of this Journal.]

II.—WOUND TREATMENT WITHOUT THE SPRAY.

By JOHN DUNCAN, M.D., F.R.C.S. Ed.

(*Read before the Medico-Chirurgical Society of Edinburgh, 5th March* 1884.)

TWO years ago I brought before this Society what I thought to be strong arguments in favour of the substitution of cotton wool impregnated with a non-volatile antiseptic for the carbolic gauze commonly in use in the treatment of recent wounds. A year ago I related also to this Society a series of experiments which led me to believe that the spray of carbolic acid was useful only in so far as it threw a germicide solution on a wound, that it had no effect whatever in rendering the atmosphere aseptic. As, therefore, the spray is not only inconvenient but also useless, it has been entirely abandoned in the wards under my care, and I desire to-night to lay before you a record of my surgical experience since I carried these changes into effect.

But first I wish to make a retraction. In one of these papers I spoke, although guardedly, of the possibility of giving up also the use of drainage-tubes, and I mentioned instances of amputation below the knee, at the ankle, and in the forearm, besides one or two other operations in which this had been done with complete success. I have since had further experience of a similar kind. Take one case out of several. A short time ago a girl was brought to the Infirmary suffering from compound fracture sustained in a steam laundry. I amputated the forearm a short distance below the elbow, as well as the tips of three fingers on the other hand. On the eighth day she was out of bed, and the dressings being removed at the end of a fortnight, the wounds were found to be healed. Nothing can be more satisfactory than to lay a patient thus aside, and simply watch the pulse and the temperature chart till sufficient time has elapsed for the wound to heal. I thought and still think that under certain conditions this might be relied upon. The first of these conditions is that the wound be dry. The surgeon cannot spend too much time in arresting the flow of blood. Blood mechanically separates the parts to be united, and removes accidental microzymes from the germicide action of the tissues. It is better to have the wound a mass of ligatured points than to have the least flow of blood from the smallest vessel. Next it is a condition of success that by pressure or position the surfaces of the wound be kept in absolute and steady apposition. Lastly, it is essential that applications to the wound be free from irritating properties. Unfortunately we have not yet attained perfection in these necessary conditions. A little reactionary hæmorrhage will now and again occur, however careful the surgeon may be. It is impossible to make accurate and effective apposition in every form of wound. We do not yet know any bland antiseptics. I had recently a case which is so curious that, while citing it as an example of the evils which accrue from want of drainage, I should like to record it on its merits.

A man, æt. 46, was sent to the Infirmary from the New Town Dispensary with a tumour in each groin. For twenty years a swelling had existed on the left side, which could be made to disappear on pressure. Eight weeks before admission it had rapidly increased and hardened, while the skin over it became red and adherent. I cut down, 12th February 1884, upon this tumour, and excised first a large mass of inflamed glands, each with its core of pus. Partly concealed by the glands I found a fatty tumour, and in dissecting it out came to a sac emerging with the fat from the widened crural canal. The tumour on the right side proved to be purely fatty, and its neck also passed through the crural ring. By dragging upon it, a portion of peritoneum could with some difficulty be brought into view. They were examples of that hernia of hypertrophied subperitoneal fat, which have been described, chiefly by German authors, as bringing about hernia of the peritoneum also, and which in this case had produced on one side a well-marked lymphatic inflammation. The bleeding being carefully arrested, the wounds were dressed without drainage. On the right side healing took place by first intention. On the left slight oozing distended the parts, diffused itself into the surrounding cellular tissue, and caused sloughing of the thin and inflamed skin which had been dissected from the glands. The wound remained aseptic, but a slow cicatrization was the result in a case where effective drainage would have insured a speedy cure.

Yet again, on 5th Feb. 1884, I excised the wrist, in a girl æt. 15, for fungous arthritis. The skin was yet unbroken, and I used bichloride of mercury as the antiseptic. When sewed up it was absolutely dry. The temperature next day rose to 101°·5. If in any case the temperature reach 101°, I regard it as an indication that the wound should be examined. It has become septic, or there is malposition, or tension, or some other local or general disorder. I found the wound tense and red, distended by a dessert spoonful of bloody serum. A drainage-tube was introduced, the temperature fell at once, and the case required no further care.

These were exceptions no doubt, but they have been sufficient to induce me to resume the habitual use of the drainage-tube in large or deep wounds. That necessitates a dressing for its removal, but this inconvenience is counterbalanced by the avoidance of accidents. I am yet undecided when this dressing ought to be performed. Twenty-four hours is sufficient for drainage in aseptic cases, and I am inclined to think that it is best then to remove the tube. If you leave it for two or three weeks there sometimes comes, in strumous patients, a tedious sinus, although with them, immediately after a wound, separation seems as active as in the most healthy and robust. I think it not impossible that we may arrive at a drainage-tube of absorbable material which may meet our wants. Those at present in use last too long and needlessly delay the complete closure of the wound. My house-surgeon, Mr Wilson, has devised a tube of plaited catgut, which I think will meet our requirements. It can be made of any thickness or thinness, of material which will quickly disappear or of lasting character. If made with a large lumen it permits the escape of fluids as easily as an india-rubber tube of the same calibre, and for the same reason and because of its loose texture the granulations eat it up more easily and quickly than an ordinary skene of catgut or a decalcified bone. It will not last sufficiently to serve in a septic case. Then we must use india-rubber or glass. I have wished to make these observations because I formerly left too much out of account the rare cases in which evil resulted from want of drainage, and because, of course, the result of any method of wound treatment must be thereby modified.

But to return to our subject. The place to be held by the various germicides in the treatment of septic wounds is a question of great interest, and which has been by no means decided. Which is best for this purpose? In what form is it to be applied? Is the application to be constant or intermittent? Are they to be used with a curative or palliative object in view? Is the possibility of further contamination to be prevented by dressings?

These and a thousand other questions are constantly pressing, and have not yet been adequately considered. I hope to return to them. Meantime, I confine myself in this paper to the treatment of recent wounds.

I need not recapitulate here the arguments which led me to prefer a dry absorbent and elastic dressing, which retains its antiseptic properties for an indefinite period. Nor need I detain you with a *résumé* of laboratory experiments, which went to show that the spray, as spray, was not germicide. I take these for granted.

Fortunately, during an operation a wound becomes contaminated far more frequently by contact than through the air. The surgeon's fingers, instruments, coat sleeves, blankets, towels, sponges, such are the sources of putrefactive mischief.

First, then, it is essential that whatever may come in contact with the wound should be absolutely pure. With the necessary precautions for this purpose surgeons are familiar, as well as with the importance of attention to the minutest detail. What is needed in the laboratory to keep a beaker of fluid or a gelatine dish aseptic, is needed also for a wound. A little matter, but not without its importance is the surgeon's comfort in this respect. Strong solutions of antiseptics injure the skin of the hands and interfere with the delicacy of touch. I have, on the whole, found it most satisfactory to wash first with a solution of carbonate of soda, and then smear the hands with a solution of carbolic acid in glycerine. The glycerine preserves the skin soft and pliable.

But given these well-known precautions as to hands, instruments, patient's skin, etc., we have also to consider how best to protect the wound from atmospheric contamination.

This resolves itself into two periods, viz., during and after the operation.

There is reason to believe that during the operation the chances of contamination are comparatively small. On a surface, three inches in diameter, there will sometimes no germ light in fifteen minutes, and to be certain of a successful cultivation about twenty minutes' exposure of such a surface is necessary. Now, healthy tissue forms, in some respects, an unsuitable soil for the growth of organisms. I have often thought that we might regard the constituents of the human body much in the same light as Darwin regarded living things in general. There is a survival of the fittest, a choking off of the weakest. Every tissue is always trying to enlarge its boundaries, and their territories are settled by a true balance of power. Disturb the balance by strengthening one, or weakening another, and the territorial limit is altered accordingly. The history of tumour growths, of grafting, whether of skin or bone or malignant disease, is an illustration of the law. The eating up of dead bone, of blood, of catgut, of sponge, is yet another example. And so, whether or not, when microbia are brought in contact with the interior of the human body, they will increase or die, must depend on their relative vital power. If, on the one hand, they are very numerous or powerfully vitalized, or if, on the other, the tissues with which they struggle are naturally weak or artificially devitalized, the microzymes will propagate themselves. Otherwise they will not. Were it not for this, there would in the old days have been no possibility of healing by the first intention, and yet it was common enough when the wound was small, and not rare even when it was large.

The tissues, then, are germicide. Is it possible to trust to this in our ordinary surgical practice? It is proved by the experience of many surgeons that we may do so in abdominal surgery. A woman, æt. 21, was sent to me by Dr Angus Macdonald, suffering from pyo-nephritis. The tumour had begun eight months before, inflammation spreading up from the bladder during the last weeks of a pregnancy. It was now of large size, reaching past the middle line of the abdomen. I operated by the median incision, and had no difficulty in removing the enlarged kidney. No antiseptics whatever were used to protect the wound during the operation, although, of course, the most scrupulous care in dressing and in all other respects was observed. It is certain that sepsis did not occur, because a glass drainage tube was kept in for three days, and the teaspoonful of serum, which was twice a day sucked up through it, was always carefully examined. The wound was healed in a fortnight, and the patient was out of bed in three weeks. The sequel of the case is so interesting that it seems worthy of a digression. At the time of the operation I tied the greatly thickened ureter in two places, and divided it low down in the abdomen, between the ligatures. A few drops of pus exuded, which were carefully mopped up, and the cut end touched with carbolic glycerine. Had I correctly estimated the meaning of these drops of pus, viz., that there was communication between the ureter and the pelvis of the kidney, and had I borne in mind that for weeks the urine had been perfectly free from pus, although in the early days of the disease it had been highly purulent, I should have understood that obstruction of the ureter existed below the spot at which I had divided it. The result was that in the fourth week an abscess slowly enlarged the stump of the ureter, and, although we succeeded in opening it from the vagina, it subsequently formed a communication with the bowel, and the patient died exhausted seven weeks after the operation.

But to return, the surgery of the abdomen shows that there, although it is certain, from the long continuance of the operation, that germs from the atmosphere must obtain access to the wound, they will not propagate themselves unless they be of peculiar virulence and in unusual numbers. I suppose that no one proposes that in the abdomen we should wash the parts with any antiseptic whatever. The certainty of producing inflammation and the risk of poisoning the patient forbid it. Some surgeons still maintain a fond belief in the spray, and cover the abdomen with a mist of carbolic solution. But their results are not better than those of others who do not. Here, then, in abdominal surgery we have facts which inevitably lead to the conclusion that the use of antiseptics, for the purpose of destroying germs in the atmosphere, or after they have lit in the wound, is unnecessary, ineffectual, and even dangerous.

May we then argue from this to ordinary surgical wounds? Is there a difference so great between the surgery of the abdomen and that of the rest of the body that a diverse practice should be followed in the one and in the other? It appears to me that this point is still undecided. I have abandoned the spray in all cases, with what results this paper is designed to show. It is useless and inconvenient. May we also abandon the washing of the wound with an antiseptic? I believe that in the great majority of cases no evil would follow. But I have no doubt also that a certain percentage would become septic which would not otherwise do so. That is the case in the abdomen, spray or no spray. Every now and again the ovariotomist has to fight septic inflammation and septic poisoning by drainage, and suction, and ice-caps, and other things. And so it is in general surgery, with a certain additional disadvantage in the fact, that the whole surface of the wound is an oozing surface, and that the soil is therefore more suitable for the development of germs.

I cannot, therefore, as yet abandon altogether the application of germicide to the wound. I try it now and again in the more simple wounds, and I have not had reason to regret it. I think it may come that we shall operate in an atmosphere rendered sufficiently pure to enable us to do so safely. Meantime, not yet venturing altogether to abandon, we try to moderate the irritating qualities of the antiseptic. With this object in view, I have elected to smear my wounds with a solution of carbolic acid in glycerine. There are two solvents of carbolic acid which mitigate its caustic action—oil and glycerine. After trying the mixture of oil and carbolic acid, I came to the conclusion that the glycerine was in many respects to be preferred. As every one knows, glycerine is itself little prone to putrefaction, and although there are rare organisms which find it a suitable soil, animal substances may be kept in it without decomposing. Oil, on the other hand, parting quickly with the acid, may easily become rancid. Again, glycerine is mixable with water, an advantage of no slight importance. Its adhesive property, moreover, at once maintains it on the surface of the wound, and is calculated to catch and retain any organisms which may alight, and so prevent them from easily finding their way into the recesses. I have found that glycerine alone is sufficient in minor wounds, but as a rule, and to make assurance doubly sure, I mix it with carbolic acid. I have generally used one part of carbolic acid to twelve of glycerine, but a solution of one to twenty is, at the same time, perfectly antiseptic, and even more free from caustic and irritating properties. I expected that the attraction of glycerine for water would produce a very copious flow of serum from the wound, but it has turned out that there is not so great an exudation as when the watery solution of carbolic acid has been used. For ordinary wounds it is quite sufficient, the skin having been rendered aseptic, to smear the solution over the surface at the end of the operation, but in wounds in which cavities are laid open, in which there are many recesses, or in which the depth is great as compared with the breadth, it is better to pour on a little from time to time during the operation. If the operation be rendered bloodless, the cavity of the wound may be sometimes filled with glycerine, and the operation be yet carried on with perfect ease under the translucent fluid. With all antiseptics it is essential that they be not introduced under pressure, especially if the tissues be already bruised. I shall presently show that even with glycerine this may prove injurious. If the case remain aseptic it causes a painful cellulitis, if it become septic it inevitably leads to sloughing. It is less injurious, however, than either chloride of zinc or the watery solution of carbolic acid under similar circumstances.

Let me enumerate, then, shortly the modifications of the Listerian precautions which I am in the habit of using. Those which I do not mention I adopt as they are usually carried out. It is well to wash the hands and the skin of the part to be operated on with a solution of carbonate of soda, and then smear thoroughly with the glycerine solution. After the operation, and during it if it be prolonged or complicated, the wound is also covered with the glycerine. Oiled silk, simple or dextrinised (it matters little which), is soaked in carbolic glycerine, and laid on the closed wound. The object of this is chiefly to prevent adhesion of the outer dressings. The whole is then covered with a large quantity of salicylic wool, a freshly torn surface being placed next the skin. If, on account of oozing, the dressing requires renewal next day, the drainage-tube is then removed; if not, its removal may be delayed for ten days or a fortnight.

I have now pursued this method for nearly a year. It has been modified at different times by using other antiseptics, as bichloride of mercury, thymol, eucalyptol, and others, but I have not been able to assure myself that any one is less irritating or more efficacious as a germicide.

Statistics have, no doubt, a certain value in determining the usefulness of different methods of dressing. But the conditions are so complicated that the record of individual cases is undoubtedly of greater importance.

In the first place, then, I purpose placing before you evidence that the method is effective in the various classes of cases which antiseptic surgery has more especially rendered feasible and safe.

Take first examples of simple osteotomy. Peter Horner, æt. 25, came to the Infirmary on 26th June 1883, on account of knock-knee. Eighteen months before admission he had been operated upon in an English provincial hospital, by removal of a wedge of bone from the inner condyle of the right femur. There was now a sinus which had not healed since the operation, and which led to carious bone. The limb operated on was inverted and bowed, the knee and ankle-joints were stiff, and the foot rigidly pointed. An advantage of the carbolic glycerine to which I have not yet referred is its power to correct septicity. I look upon it in this respect as superior to chloride of zinc, and much less irritating if it fail to render the part at once aseptic. In this case the carious bone having been freely exposed was gouged out, and the part being drenched with glycerine at each dressing speedily became aseptic, and after a few weeks healed. The left leg which had been left untouched was now operated upon. It appears to me certain that Mr M'Ewen's plan of operation for knock-knee is greatly to be preferred to all its numerous rivals in respect of simplicity, safety, and the subsequent comeliness and usefulness of the limb. The only modification of it which is an improvement is the placing of the incision on the outer instead of the inner side of the limb. If the wound be over the outer condyle, pressure may be applied on the inner side to keep the limb straight, and much less chiselling and force is required to divide the bone. It may be objected that a gap is left at the outer edge of the divided bone. The answer is, that such is the case to a certain extent with both methods, that the union of the fracture never fails, and that what slight lengthening there may be of the limb is not inconvenient. By this plan, then, I operated on Peter Horner. The wound was dressed as has been described, and the limb was placed at rest. I am in the habit of using in knock-knee an apparatus which I find useful both for rectifying the deformity without operation, and also after section of the bone. The double long splint is used with the tie rod at the foot, and extension is applied to the limb by weight and pulley. This last aids in diminishing the pressure on the outer condyle, and so allowing its more rapid growth in the child. In the adult after section it tends to steady, wonderfully mitigates the pain of any slight movement, and helps to maintain the proper straightness. But the chief difficulty in the treatment of knock-knee by apparatus is to keep the leg in apposition to the splint. The slightest eversion of the limb eludes the straightening force whether that be rigid or elastic. A little experiment will at once show how this may be avoided. If a long splint be applied to the outer side of a knock-knee, and pressure made to draw the knee to the splint, it will be found that this is easily accomplished, but only because the knee has become slightly everted and flexed, while the heel has separated from the splint. If the heel be held firmly applied to the splint it is impossible to make the knee touch it. I therefore fix the heel by attaching to the lower part of the long splint a little suitably padded wooden trough.

In Peter Horner's case it was impossible to use the double splint, because of the distortion of the right leg. In other respects the apparatus was applied as described. At the end of a fortnight the wound, which had been left open without a drainage-tube, was found to be healed when looked at for the first time. A jointed support was subsequently fitted to his left leg, while a high-heeled boot was adjusted to his right, and he went out after fourteen weeks, walking well with the aid of a stick, a feat which had long been impossible to him.

I have selected this case for narration simply because of its intrinsic interest, not because it presented any peculiarity in regard to its successful result. All the cases of a similar character have done equally well, viz., two other operations for knock-knee, two of section of the tibia for deformed union of old fracture, one of resection for overgrowth of bone in a stump of the upper arm. They were all healed when the first dressing was removed.

Wounds of joints are important from a septic point of view. If they go wrong, the joint is spoiled and the patient in great risk. I have operated once for badly united fracture of the patella of old standing since I abandoned the spray. Considering the good results that are easily to be obtained by other treatment, and the evil effects that may follow the slightest error on the part of the surgeon or carelessness on the part of the patient, I think it unjustifiable to suture in recent fracture. When the limb is rendered useless by wide separation of the fragments it is far otherwise. The operation, however, is then difficult. In this case, by section of the quadriceps extensor, I was able to reduce the gap from 2½ inches to half an inch. The wound was dressed the next day on account of serous oozing, when the drainage-tube (inserted in front only) was removed. It was not again seen till it was healed. Of the same character is a case in which I incised the elbow on account of synovitis just become purulent. The temperature immediately fell, the pain disappeared, and the only dressing required was for removal of the drainage-tube a fortnight after the operation.

A very good illustration of another class, that of compound fracture, is found in one of the fibula opening into the ankle-joint. The tibial malleolus was also broken. My house-surgeon, Mr Wilson, therefore made an opening on the inner side, passed a drainage-tube through the ankle, washed out with carbolic glycerine, and dressed with salicylic wool. I removed the tube next day, the retentive apparatus was kept on for three weeks, the dressings for a week longer, and the patient left in six weeks with a perfectly movable joint.

A class of case which tests the value of any proceeding for maintaining a part aseptic is the opening of chronic abscesses. A psoas abscess, from caries of the spine, was recently brought to a successful termination after about six or seven dressings at long intervals, and the efficacy of the plan is all the better illustrated that the treatment was carried out by Dr Hodsdon during my absence from town in the autumn. There are at present in the Infirmary two cases of empyæma. In both the treatment has been, so far as it has gone, absolutely successful. The wounds are still open and dressed at intervals, but the temperature is normal, and the pus scanty, pure, and sweet. In such cases the patient is directed to hold the breath while the dressing is changed. Formerly, while I had faith in the spray, I used often to allow the air to whistle in and out of the opening for considerable periods, while examining the patient or demonstrating to students. Most of my cases became septic, with increase of temperature and pus formation, as one would now anticipate, considering the inefficacy of carbolic spray as a germicide.

I cannot conclude this list of cases without referring to one of which, doubtless, the fatal termination is not far off, but which illustrates the safety of the method. The patient, a young woman of 26, had suffered for a year from sarcoma of the skull. It was nearly two inches in diameter, and so round and well defined that by some who saw it it was regarded as a cyst. It had produced double optic neuritis and intense headache, but no other cerebral symptom whatever. I determined to expose it, and ascertain if it were removable. I found that at isolated spots, over an area of five inches, little portions of the skull were softened by sarcomatous tissue emerging from the diplöe. I closed the wound, and five days afterwards, because the patient was anxious to return home as soon as possible, we removed the dressing, and found that healing was practically accomplished.

But lest I become tedious, I close this history of successful cases. They are sufficient to establish the proposition that the method is effective in maintaining parts aseptic if properly carried out.

I have still a word to say as to failures. The comparative frequency of these often means simply the idiosyncrasy of individuals concerned in the management of the cases, and, indeed, there are very different records in this respect throughout my Infirmary experience. I lay little stress, therefore, on their number as the test of a method of treatment, but when analysed they may yet afford information.

I have first to record four deaths among patients treated by this plan. These were cases of trephining, of nephrectomy, of double amputation, and of amputation at the elbow. The compound fracture of the skull died in six days of extensive cerebral injury, as discovered on post-mortem examination, when, also, the wound was found almost healed and perfectly aseptic. The nephrectomy has already been referred to. The amputation of thigh and leg died the same night from his internal injuries.

The amputation of the elbow is the only one which can be placed to the discredit of the treatment. It was performed in a woman, æt. 72, for sarcoma of the ulna. The wound immediately became septic, a considerable amount of cellulitis followed, and the patient died on the twenty-ninth day, worn out by the pain, inflammation, and discharge. The lesson to be drawn from it is one which may be enforced by two other cases in which, although recovery ensued, the local accidents were identical. One was a double amputation, tarso-metatarsal on the one side, below the knee on the other. The foot healed with one dressing, but the leg, although making an admirable stump in the end, was attacked by sloughing cellulitis. At the time of the operation I observed, too late, that a serious error had been committed by one of the assistants, which of necessity conveyed septic material to the wound. This I endeavoured to remedy afterwards by injecting it forcibly with carbolic glycerine after the sutures had been inserted. It is curious how slowly a lesson of this sort is learned. I had seen the same result in other hands with other antiseptics, and I had injected with a like effect in the amputation of the elbow for a precisely similar reason. Of course I had done it in others without mischance. The sloughing occurs if the injection be unsuccessful. The combined effect of septicity and antiseptics is too much for any tissue. The third case was similar. A compound Pott's fracture of the fibula with opening of the ankle-joint was injected with carbolic glycerine. In this case it was not the force used, but the absence of a drainage-tube, which led to cellulitis. It has recovered well, though slowly, but the antiseptics, too long kept in contact with the texture, did harm when the part became septic. This case contrasted strongly with the other compound fracture into the ankle-joint, which I have already related, and which happened to be under treatment at the same time.

A certain number of other cases became septic, as judged by the odour, the discoloration of the protective, and other signs. These were an excision of the testicle and a hernia from displacement of dressings by the patients, one excision of the mamma, and one excision of the knee. Altogether seven cases became evidently septic,—a proportion, in my experience of Infirmary work, as small as by other methods.

If we judge by microscopic examination of the discharges, the proportion in which bacteria or micrococci could be found was very much smaller than under the gauze and Mackintosh. I do not attribute this to any more powerful germicide properties in the dressing; I believe it to be due to the fact that a far larger number of the cases are absolutely dry, and thus afford no possible soil for development. It appears to me, however, a fact of great significance, that, notwithstanding the absence of the spray, fewer cases are scientifically septic.

I append a table of all the major operations, in cases with unbroken skin, which I have personally performed in the Infirmary, and treated by this plan, since I finally abandoned the spray. I find that, including these and all others, during the past twelve months I have performed forty-one major amputations and excisions, and seventy-nine other operations of a like magnitude, on patients in the wards of the Infirmary, besides many other minor amputations and operations involving a breach of surface. Of these six have died,—

1 excision of the tongue—from septicæmia.
1 lithotomy—from erysipelas of the head, to which he was very liable.
1 nephrectomy.
1 colotomy—of diarrhœa, nine weeks afterwards.
1 amputation of leg and thigh—the same night.
1 amputation of elbow—of sloughing cellulitis.

I mention these figures because they imply a not unhealthy condition of the wards generally during the period involved in the tables. I have already said that no great reliance is to be placed on statistics in a matter of treatment; but I have endeavoured to give such particulars of the individual cases as may, to a certain extent, enable one to judge of their value, without making them unnecessarily bulky.

There are some points which I should have liked to bring out more clearly. Thus, instead of the date of dismissal I should have preferred to give the day on which the wound was found healed. This is, of course, much earlier, as a patient is rarely sent out the moment a wound has closed. Again, I should have liked in each case to give the precise number of dressings; but these matters have not always been accurately recorded in the case books.

It will be seen, however, that of the fourteen amputations six, of the seven excisions two, and of the thirty-two other operations fifteen, were only dressed once. When two, three, or four dressings are recorded, they were performed for the removal of the drainage-tube, for early oozing, sometimes simply from curiosity. It is impossible to exaggerate the importance of this infrequent dressing as adding to the safety, comfort, and rapidity of healing.

Four deaths have occurred. One only has connexion with the mode of dressing, and I have already commented on it. The deaths from trephining, nephrectomy, and double amputation must have happened, whatever the mode of dressing. I might legitimately have added to the tables six cases of compound fracture, all of whom recovered.

I claim that these cases confirm the statements made in a former paper as deductions from experiments with the spray, and show that, from an antiseptic point of view, there is no appreciable difference whether an operation be performed with or without it; and that, from every other point of view, these alterations in wound treatment are greatly for the better.

TABLE OF MAJOR OPERATIONS.

No.	Name.	Nature of Operation.	Age.	Date of Operation.	Date of Dismissal.	Cured.	Died.	Remarks.
1.	R. L.	Myxoma of abdominal wall.	8	15th Nov. 1883.	1st Dec. 1883.	1	0	One dressing. Tumour size of hen's egg.
2.	J. S.	Cyst of thigh.	37	13th Nov. 1883.	18th Dec. 1883.	1	0	Wound healed without pus, but phlebitis of other leg delayed dismissal. A blood cyst under the hamstrings.
3.	J. R.	Large cyst of scalp.	50	22nd Oct. 1883.	15th Nov. 1883.	1	0	One dressing.
4.	M. M'K.	Excision of patellæ bursa.	22	22nd Oct. 1883.	15th Nov. 1883.	1	0	One dressing.
5.	A. S.	Sarcoma of skull.	26	29th Jan. 1884.	5th Feb. 1884.	1	0	One dressing. Tumour not removed.
6.	M. M.	Fatty tumour in each groin.	47	12th Feb. 1884.	Still in Ward.	1	0	One dressing on right side. Aseptic slough on left.
7.	M. S.	Large fatty tumour of buttock.	30	21st Feb. 1884.	Still in Ward.	1	0	Six dressings. Now healed. Aseptic. Drainage difficult from decubitus.
8.	H. D.	Sarcoma under sterno-mastoid.	56	19th Feb. 1884.	5th March 1884.	1	0	Two dressings. Size of goose egg. Drainage-tube of plaited catgut absorbed by second dressing. Fourteen days.
9.	G. H.	Lymphoma of neck.	24	1st May 1883.	19th May 1883.	1	0	One dressing.
10.	J. R.	Adenoma of mamma.	28	15th Jan. 1884.	31st Jan. 1884.	1	0	One dressing.
11.	A. S.	Scirrhus of mamma.	47	6th April 1883.	19th April 1883.	1	0	Two dressings.
12.	M. T.	Scirrhus of mamma.	73	17th May 1883.	7th June 1883.	1	0	Aseptic.
13.	E. S.	Scirrhus of mamma.	45	15th May 1883.	2nd June 1883.	1	0	Aseptic.
14.	B. M.	Scirrhus of mamma.	42	22nd May 1883.	14th July 1883.	1	0	Aseptic. Extensive operation. Glands in axilla.
15.	H. H.	Scirrhus of mamma.	56	12th June 1883.	18th July 1883.	1	0	Became septic, but healed well.
16.	A. H.	Scirrhus of mamma.	53	10th July 1883.	1st Sept. 1883.	1	0	Became septic. Skin deficient.
17.	J. D. S.	Trephining, for compound fracture.	66	5th Dec. 1883.	10th Dec. 1883.	0	1	One dressing. Died of cerebral injuries.
18.	P. H.	Trephining, for compound fracture.	52	2nd Jan. 1884.	24th Jan. 1884.	1	0	One dressing.
19.	G. B.	Resection of humerus in stump.	17	17th Jan. 1884.	29th Jan. 1884.	1	0	One dressing.
20.	P. T.	Section of tibia, for deformed union.	46	7th Jan. 1884.	31st Jan. 1884.	1	0	One dressing.
21.	M. M.	Incision of tibia for ostitis.	33	14th Jan. 1884.	22nd Feb. 1884.	1	0	Two dressings. No pus found, but inflammation cured.
22.	J. N.	Section of tibia, for deformed union.	36	28th Feb. 1884.	Still in Ward.	1	0	Not yet dressed. Is perfectly well.
23.	J. T.	Section of radius, for osteoma.	18	4th Jan. 1884.	11th Feb. 1884.	1	0	Three dressings.
24.	A. C.	Incision of elbow.	18	19th Feb. 1884.	Still in Ward.	1	0	Has not been dressed. Temp. normal. Free from pain.
25.	M. S.	Femoral hernia.	45	9th May 1883.	9th June 1883.	1	0	Aseptic.
26.	M. M.	Femoral hernia.	65	13th Feb. 1884	3rd March 1884.	1	0	Became septic from displacement of dressings, but healed well.
27.	J. D.	Femoral hernia.	57	6th June 1883.	1st July 1883.	1	0	Aseptic course.

28.	J. B.	Nephrectomy.	22	14th June 1883.	31st July 1883.	0	1	Case related in paper.
29.	S. R.	Excision of testicle.	15	26th Feb. 1884.	Still in Ward.	1	0	Dressings were displaced by patient, but healing nearly accomplished.
30.	P. H.	Knock-knee.	27	26th June 1883.	16th Oct. 1883.	1	0	Referred to in paper. One dressing.
31.	M. T.	Knock-knee.	14	27th Feb. 1883.	26th Mar. 1883.	1	0	One dressing, one side; other treated by apparatus.
32.	W. M.	Knock-knee.	16	18th Mar. 1883.	16th April 1883.	1	0	One dressing, double.

MAJOR AMPUTATIONS.

1.	J. H.	Thigh, for dislocation of knee.	28	22nd May 1883.	7th July 1883.	1	0	Four dressings.
2.	P. M.	Thigh, for dislocation of knee.	21	29th May 1883.	5th July 1883.	1	0	Two dressings.
3.	A. C.	Thigh, for gangrene.	62	29th Nov. 1883.	23rd Feb. 1884.	1	0	One dressing. Healed in fourteen days. Arteries were like pipe stems.
4.	M. M.	Thigh, for dislocation of knee.	17	31st May 1883.	10th July 1883.	1	0	Aseptic. Healed in three weeks.
5.	J. M.	Thigh and leg. Railway injury.	50	13th June 1883.		0	1	Died the same night. Shock and internal injuries.
6.	J. S.	Leg, for ununited fracture.	4	19th June 1883.	11th July 1883.	1	0	Aseptic.
7.	M. S.	Ankle, for strumous discharge.	15	6th April 1883.	9th May 1883.	1	0	One dressing. Recurrent disease after excision three years before.
8.	M. M.	Ankle, for strumous discharge.	32	12th June 1883.	11th July 1883.	1	0	Aseptic. Light dressings. Surface slow of healing.
9.	A. D.	Ankle, for gunshot wound.	17	17th Nov. 1883.	9th Feb. 1883.	1	0	Small portion of injured flap sloughed.
10.	R. W.	Leg and foot.	42	9th Jan. 1884.	Still in Ward.	1	0	Quite healed. Referred to in paper.
11.	J. J.	Arm, for burn.	23	3rd July 1883.	8th Aug. 1883.	1	0	One dressing.
12.	A. S.	Elbow, for sarcoma.	72	17th July 1883.	14th Aug. 1883.	0	1	Died from diffuse cellulitis.
13.	J. H.	Forearm, for injury.	36	24th Oct. 1883.	17th Nov. 1883.	1	0	One dressing. Found healed 9th Nov.
14.	A. D.	Forearm, for injury.	22	6th Feb. 1883.	Still in Ward.	1	0	Found healed on 16th Feb. First dressing. No drainage.

EXCISIONS.

1.	M. W.	Excision of knee.	16	31st May 1883.	11th Sept. 1883.	1	0	Became septic. Amputation by Dr Maclaren, 11th Sept., for recurrence of bone disease, sinus never having healed.
2.	J. B.	Excision of knee.	17	24th May 1883.	6th July 1883.	1	0	Four dressings. Pressure ulcer from splint delayed.
3.	J. M.	Excision of knee.	18	18th Dec. 1883.	Still in Ward.	1	0	Wound healed in seventeen days. Now encased in plaster.
4.	G. L.	Excision of elbow.	17	8th Jan. 1883.	7th Feb. 1883.	1	0	Five dressings.
5.	R. W.	Excision of elbow.	9	29th Jan. 1884.	Still in Ward.	1	0	Healed by first intention.
6.	W. M.	Excision of wrist.	12	22nd Jan. 1884.	29th Feb. 1884.	1	0	Dressed only 6th, 15th, and 29th Feb.
7.	E. D.	Excision of wrist.	15	12th Feb. 1884.	Still in Ward.	1	0	Doing well. Referred to in paper.

III.—CLINICAL OBSERVATIONS ON A CASE OF PERFORATING GASTRIC ULCER.

By J. O. AFFLECK, M.D., Senior Assistant Physician to the Royal Infirmary, Edinburgh, Lecturer on Practice of Physic, Extra-Mural Medical School, Edinburgh.

(*Read before the Medico-Chirurgical Society of Edinburgh, 6th February* 1884).

JOHN M., æt. 21, police constable, was brought into the Royal Infirmary about 7 o'clock on the morning of the 4th May last, suffering from violent pain in the abdomen, with which he had been seized while on duty. So severe was the pain that he had to be brought to the hospital on a stretcher. He was attended to by the house physician on duty, and was admitted into Ward VI. under my care.

State on Admission.—The patient was a man of about 6 feet in height, and of very powerful physique. He was in great agony from pain in the belly, which had seized him suddenly, and of which the following brief account was obtained. He had gone on duty the previous night at the usual hour, in his ordinary health, with the exception of a slight cold which he had had for some days. During the night, while going his rounds, he had complained to his sergeant of some internal pain, and was advised to go home, but he himself thought he would be quite able to hold on until his time for being relieved in the morning. He had a cup of coffee in the course of the night. About 6 in the morning, while in the act of coughing, he was seized with the violent pain for which he was brought to the Infirmary. On being put to bed the patient rolled about in agony and then lay on his face. He vomited from time to time some brown coloured bilious matter. The abdomen was tender all over, and no proper examination could be made. His pulse was 90, his temperature normal, his tongue slightly furred and coated with sticky mucus. He had an anxious suffering look, but was quite conscious. Hot fomentations were applied to the abdomen, various palliatives employed, and an enema administered, but without result. When I saw him about a quarter before twelve, he was lying on his back with his legs drawn up, in a semi-collapsed condition, with a rapid, feeble pulse, quick shallow breathing of markedly thoracic character, complaining of great abdominal pain and tenderness, so that palpation could scarcely be attempted. The pain was greatest in the upper part of the abdominal region. There was no evidence of hernia nor any localized swelling of the abdomen, which on the contrary was decidedly retracted all over. The heart's sounds were natural, but there were some dry bronchial râles in the chest. I regarded the case as one of acute peritonitis, but the suddenness of the onset and the severity of the symptoms suggested some antecedent lesion as giving rise to the inflammation—such as perforation or strangulation of the bowel. I ordered a powder of one grain of opium and five grains of bismuth to be given every two hours, another enema, as the bowels had been constipated, and turpentine stupes to the abdomen. Small quantities of liquid nourishment were also given at intervals. After the patient took the first powder the vomiting entirely ceased. I came back to the Infirmary in the evening about 7, and found the patient half sitting up in bed, deeply livid or leaden coloured all over, pulseless, and sinking rapidly, but still quite conscious. He died about 9—fourteen hours after admission

Post-mortem Examination of the Abdomen only was allowed.—It was made 17 hours after death, by the pathologist. On opening the abdomen there was at once observed evidence of extensive peritonitis in the form of recent lymph gluing the folds of intestine together. The abdominal cavity was found to contain a large quantity of yellow, sour-smelling fluid in which were floating white coagula, evidently portions of curdled milk, thus indicating a perforation probably of the stomach. This proved to be the case, as on raising the organ an opening fully larger than a sixpence, apparently that of an ulcer, was found in the greater curvature, on the posterior wall, and near the cardiac end. On removing and cutting open the stomach, the ulcer proved to be a marked example of the perforating gastric ulcer, nearly an inch in diameter, round in form, with well-defined somewhat thickened edges. It was manifestly one of the chronic variety, and had eroded all the coats of the stomach, the peritoneal coat doubtless giving way and opening by a large rent when the patient had the attack of coughing in the morning. The stomach otherwise was remarkably free from morbid appearance, and the other abdominal viscera were healthy.

This case presents some features of interest that appear to be not unworthy of notice.

In the first place, it is an instance of the somewhat rare occurrence of perforating gastric ulcer in a man. It is well known that the disease is at least twice more common in women. But it illustrates in addition the fact, which has been oftentimes observed, but which cannot be too constantly borne in mind, that this serious and often fatal disease may exist in a marked form in a person possessing to all appearance a high degree of health. Doubtless such an important lesion as a gastric ulcer can scarcely ever exist without producing some symptoms, and probably strict inquiry might have furnished information of occasional pain, or more or less dyspepsia; but in the present instance these certainly did not attain to any magnitude, and indeed, as far as could be ascertained, there did not seem to have been any manifestation of the disease during life. On the contrary, the patient was regarded as a very strong and fine specimen of a young constable. It is, however, in such very instances of the disease, where no distinct symptoms betray its existence, that this fatal occurrence is apt to take place, and for obvious reasons. The patient has not the advantage of being under the treatment, both hygienic and dietetic, which would go far to avert such a catastrophe. He takes his ordinary food and does his usual work, when, some day, after a full meal or under a heavy strain, the perforation takes place. It has occurred to me to observe more than one instance of this kind, and such cases convey the admonition that where symptoms at all pointing to gastric ulcer exist they ought to be carefully investigated, and the utmost caution be enjoined as to the diet and mode of life. The healthy character of the gastric mucous membrane generally in this case is a point of much interest. Similar appearances have often been observed in this disease. Dr Matthew Baillie, in his work on *Pathological Anatomy*, refers to this, and in several instructive clinical cases narrated by Dr Abercrombie in his work on *Diseases of the Stomach* this striking appearance is noticed. This fact seems to lend strength to the view that some limited nutritive change, *e.g.*, thrombosis or embolism, or areas of lowered vitality, upon which local irritations or a hyperacid gastric juice exercise their effects, precedes the development of the ulcer. But, again, the locality of the ulcer in this case was that of the least frequent site of the lesion, namely, the greater curvature and the cardiac end of the stomach. Thus, according to Dr Brinton's statistics, only 5 out of 220 were in the greater curvature, and the same is the proportion of the cases of perforation in relation to locality. And, further, the age of the patient differed considerably from the average age of perforations in the case of men. Dr Brinton, in his classical work on the subject, points out that while the liability to perforation during the whole of life is nearly equal in the two sexes, the distribution of this liability at various periods of life varies materially, and he gives as the average age of the subject of perforation—27 in the female and 42 in the male.

The symptoms in the case pointed clearly to some serious visceral lesion within the abdomen, and suggested the occurrence of sudden perforation or strangulation of the bowel, for it scarcely ever happens that acute idiopathic peritonitis is attended with such urgent manifestations at the outset. A certain diagnosis was scarcely possible in the circumstances, since there was no history of previous illness. In all such sudden and violent seizures one of the first points is to endeavour to ascertain the nature of the lesion, and the physician has always to bear in mind the possibility of the existence of a strangulated hernia, or of some other form of obstruction of the bowel, which may make itself evident to palpation. Even, however, in such instances death seldom takes place for two or three days, by which time the obstruction is made plain by the occurrence of fæcal vomiting, etc. The suddenness of the symptoms of sinking is of considerable diagnostic importance. Death from perforation does not seem to be produced entirely or immediately by peritonitis, but rather it would appear—at least in no small measure—by the shock which perforation entails. Cases have been recorded where death has followed the perforation almost instantaneously. On the other hand, of course, instances occur where the fatal result in undoubted perforation is delayed for several days; while, again, a few remarkable examples have been observed of recovery following symptoms of this accident. But I believe the general experience is that death takes place after perforation in from twelve to twenty-four hours; and the influence of the shock is shown by the rapid collapse of strength, the small flickering pulse, the quick, shallow breathing, and the remarkable leaden hue the patient assumes before the termination—due, doubtless, to general venous stasis in connection with the somewhat sudden failure of the heart, which might be characterized as a condition of acute asthenia. Whether the perforation be of the stomach or intestine the symptoms are very much alike, as I have now and then occasion to observe in the fever wards of the Infirmary in the case of the giving way of typhoid ulcers. There is probably, however, in the latter case, on the whole, less suffering than in such an instance as that of J. M.

In dealing with the formidable symptoms of perforation there are certain indications which are important to follow—one of which is the relief of the pain. Probably, in most instances, the hypodermic injection of morphia will be most serviceable, but if an opiate be given by the mouth, the best form for administration would be the powder. Feeding is best done by the bowel, although the patient often suffers from thirst for which he desires fluids to drink. In cases like the present, where no previous history exists to throw light on the seat of the lesion, and where yet the occurrence of perforation is rendered probable by the symptoms, it would, perhaps, be the most judicious course to act as if the stomach were the organ perforated, and to avoid as far as possible the administration by the mouth of either food or medicine. For, unquestionably, should perforation of the stomach exist, the passage of the ingested matters through the opening into the peritoneal cavity will only have the effect of rendering more general the succeeding peritonitis, and thus extinguishing any slight chance the patient might otherwise have.

IV.—LUPUS OF THE VULVO-ANAL REGION: WITH CASE.

By Angus Macdonald, M.D., Physician for and Clinical Lecturer on Diseases of Women, Royal Infirmary, Edinburgh.

(*Read before the Edinburgh Obstetrical Society*, 13*th February* 1884.)

Lupus of the vulvo-anal region is undoubtedly a rare disease. Otherwise it would be impossible to explain the paucity of observation that is bestowed upon it in our text-books of gynecology. In almost every one of them the disease is conspicuous by its absence. Even Hart and Barbour, though certainly fuller than most text-books of gynecology, make no mention of such an affection; and most such, as Schrœder's, refer to it, if they do so at all, in the most perfunctory manner.

The disease was first described as a separate affection by Huguier in a memoir of great merit, presented to the French Academy of Medicine in 1848. Up to that time the affection appears to have been slumped with either syphilis or some form of carcinoma. Huguier calls it l'esthiomène, and divides it into several subvarieties, such as the serpiginous, the hypertrophic, and the perforating variety. It is doubtful, as West expresses it, whether anything is gained by such distinction, as all varieties may be present in the same case. But, so far as I can gather, the opinion seems to have settled into contracting Huguier's three subvarieties into two, viz.—1. The superficial or serpiginous; 2. The hypertrophic.

By West the disease is carefully treated, reference being made to five cases. In *Duncan and West* further reference is made to another case, to which I will refer in the sequel, as I had charge of the patient during her fatal illness. The best account of the disease, in the English language, which I have been able to lay my hands upon is from the pen of Dr Isaac E. Taylor, and is contained in vol. vi. of the *American Gynecological Transactions*, p. 199. He gives an account of seven cases.

In the course of practice I have only met with three examples of this disease, and all have been of the hypertrophic variety. In saying so I mean to exclude that condition sometimes called lupoid ulceration of the vulva, when there are numerous tender, ulcerated, and painful spots near the vaginal orifice, which are so difficult to heal, and which are so liable to return again after they have been apparently healed. Of these cases I have seen a great many more than I care for, or have obtained much credit from. They form a very unsatisfactory class of cases. I mean that what I refer to is true lupus, either of the hypertrophic or serpiginous form, and that I have as yet only met with the former variety. Of the three cases the first, or

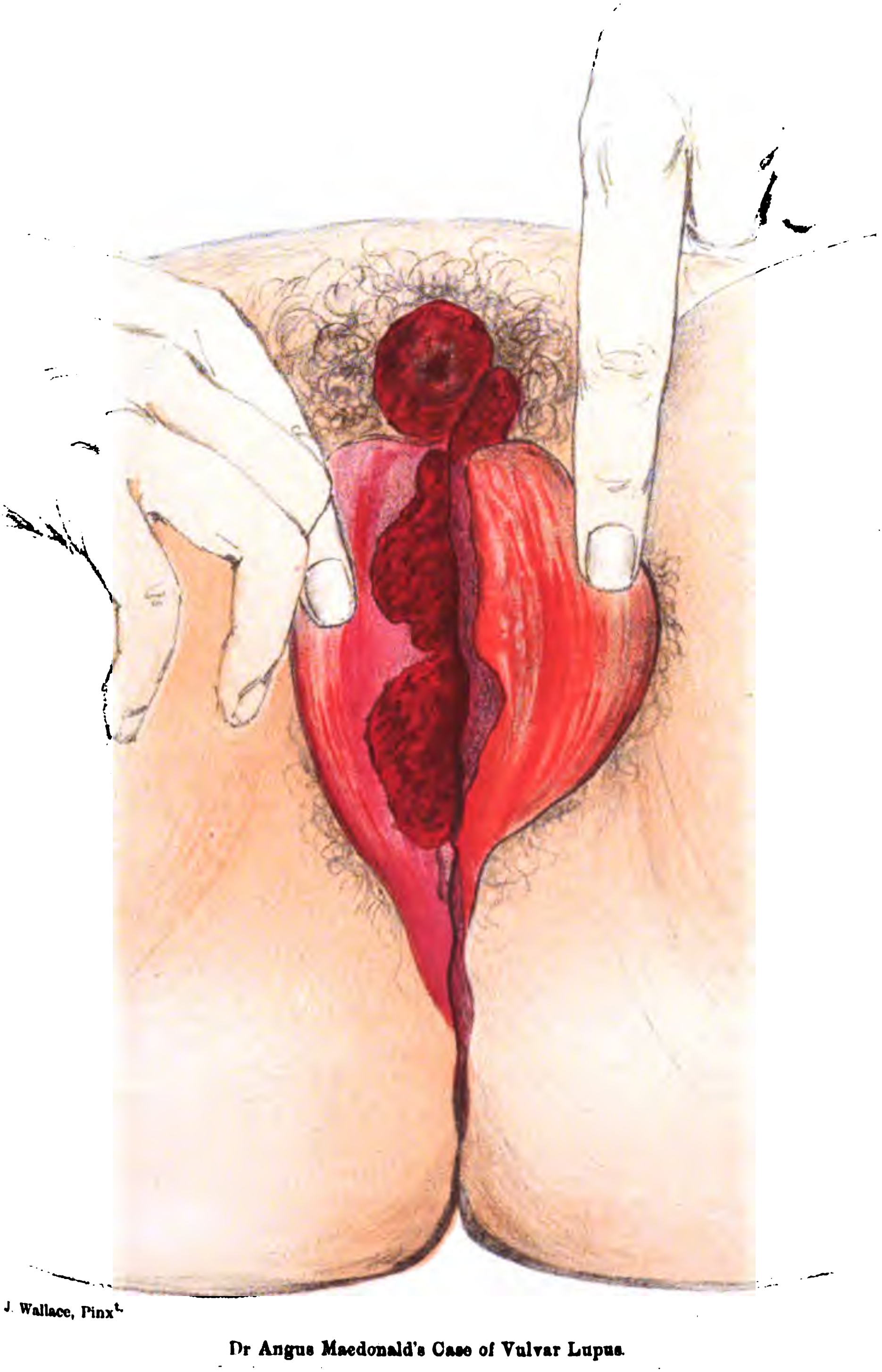
CASE I., came under my notice after it had reached an extreme degree of advancement. It had then lasted some six or eight years. The destruction of tissue was terrible in its extent. I have reason to know that it is the same case as that referred to by Duncan in *Duncan and West*, p. 656. Of it at the time when he saw the case, which at least was a year before I was introduced to the patient, Dr Duncan says:—"A case to which I was called some years ago is, so far as I know, so unprecedented in the amount of destruction as to be worth describing. I only saw it once in consultation. The disease was at one time regarded as cancerous. The patient, aged about forty, had had the disease for at least five years, and she lived many years after my visit. While the disease was already extensive she bore a child. On the hips, just beyond the ischial tuberosities, were long scars, thin and bluish, of healed ulcers. The entire ano-perineal region was gone, there being a hollow space as big as a fœtal head. The urethra was entire, as well as the mucous membrane between it and the cervix uteri, which was healthy. Except the anterior portion of the vagina, no trace of it or of the anus or rectum was discoverable. Behind the cervix uteri, the bowel opened by a tight aperture just sufficient to admit a finger. When the fæces were hard she could keep herself clean, but only then. Although the extent of ulceration was severe, the patient was attending to her household duties.'

To this graphic description of the case I can fully subscribe, with this addition, that latterly the ulceration went still higher up into the pelvis, leaving the bowel hanging loose for some distance from the upper level of ulceration, giving it the appearance of a torn sleeve of a coat. This is usually found to occur in this kind of ulceration, as the bowel wall resists its action more than the cellular tissues. This patient lived two and a half years after the time referred to by Dr Duncan, and died of exhaustion and diarrhœa. There was no perforation of the bladder, and I do not think there was, even at the end, any peritonitis to give evidence of invasion of the peritoneum by the ulcerative process. The patient, through the distress and misery associated with her miserable condition, became latterly an opium eater, which, of course, did not help to mend matters. Notwithstanding this shocking amount of and prolonged continuance of ulcerative action, there was no involvement of inguinal or other glands. Long before the case passed into my hands, all scope for anything else than palliation was gone. I am not aware what the treatment adopted in the earlier stages was.

CASE II.—Mrs B., æt. 33, the mother of one child, was brought to consult me by her medical adviser in the beginning of March 1881, on account of pain and swelling of the right labia majora and minora. This gave rise to pain on connexion. Its commencement was traced to an injury sustained twelve months previously, while engaged skating. The patient fell backwards in such a manner as to push an iron clamp with considerable violence against the vulva. There was much swelling of the parts, and painful micturition subsequent to this injury. She believed also that the present illness was originated by it. The patient was well nourished, and healthy-looking. Her medical attendant was greatly concerned about her case, as he had come to the conclusion that the patient suffered from epithelioma of the vulva. On examination, I found well-marked lupus of the vulvo-anal region. The disease had already affected a great part of the right labium majus and minus, as also a smaller portion of the left labium majus and minus. It also extended back over the perineum for about three-fourths of an inch, and upwards into the vagina for about an inch. There was present the peculiar firmness and rigidity peculiar to lupus ulceration, when it affects the vagina on its posterior part, as also great hypertrophy of the labia, with no involvement of the inguinal or other glands, and no history of syphilis, so that I had no difficulty in arriving at the conclusion that the case was one of lupus, and not of carcinoma. This patient completely recovered in the course of three or four months. The treatment adopted was to cut, gouge, and burn off with Paquelin's cautery all the diseased tissue, and then treat the raw surface as a granulating sore. Care was taken in the vagino-rectal septum only to use the Paquelin's cautery so far as was absolutely necessary to arrest bleeding. I heard from the patient upwards of a year subsequently, and there had then been no recurrence of the disease.

CASE III.—A. C., æt. 46, married, having eight children, was admitted into Ward XXVIII. on October 31st, 1883, complaining of a "growth" on the vulva. The first sign she had of anything being wrong was, about two years ago, the appearance of a discharge of a whitish-yellow colour, at times bloody, but more recently watery-looking. Soon after this discharge commenced there appeared spots upon the vulva, which gradually increased in size, and have latterly broken into open sores. Patient was always a strong, healthy woman, and there was no history of malignant disease in the family.

The following is the report of the examination of the parts on admission:—Both labia majora, especially the left one, are abnormally large. At the situation of the anterior commissure there are two nodules, the one on the right being about half the size of a boy's marble, the one on the left about a third thereof in size. The smaller of these nodules is somewhat irregular in shape. Their colour is a deep rose, and their inner aspect where they meet is raw. On separating the labia majora, there is disclosed a considerable ulcerated surface from which there exudes a grumous fluid. The chief situation of the ulcerated surface is towards the posterior commissure, where it extends on each side to a distance of one inch and a half in breadth by three inches in length, the long axis of the surface being from before backwards. On deeply separating the labia, it is found that ulcerative action has destroyed almost completely both labia minora, their situation being occupied by two elongated ulcerated surfaces. But the posterior portion of the left labium minus is very much hypertrophied and separated from the rest of the vulva by ulcerative action, so as to present a polypoid character. In the direction of the clitoris this ulcerative action burrows upwards to the extent of fully an inch. The feel of the ulcerated surfaces, as well as of their surroundings, wants that marked hardness



J. Wallace, Pinxt.

Dr Angus Macdonald's Case of Vulvar Lupus.

characteristic of carcinoma. There is considerable hypertrophy of the tissues surrounding the ulcerated surfaces. The ulceration on the left side goes quite to the anus. On the right, it leaves a portion of the perineum about an inch in length free. At no part does the disease ascend more than one inch up the vagina. The uterus and vagina are otherwise healthy, and there are no indications of enlargement—either of the inguinal or of the pelvic glands. Attentive exploration of the other organs revealed nothing unhealthy in the patient.

The disease was diagnosed as lupus of the vulva. It ought to be mentioned that the patient was a few days in hospital during the month of September. But as at that time we were a little doubtful of the diagnosis, the patient was sent home, and asked to return in October. On 17th November, the lupoid tissue was removed, partly by gouge, partly by scissors and cautery, in the posterior part. On the left side, and superiorly, the entire diseased tissues were separated and removed by the thermo-cautery knife alone. There was some bleeding from the surfaces laid bare by the scissors, none from the cauterised surface. On the second evening after operation the temperature rose to 100°, but subsequently remained normal until the 25th November, when it was 105° in the afternoon. This temperature was soon brought down again to normal by quinine and eucalyptol. The wound was at first dressed with iodoform. There was a good deal of sloughing, but no hæmorrhage. On 3rd December, the iodoform was replaced by oiled lint. On the 12th December, carbolic glycerine was used instead of oil, and a marked improvement in the healing of the wound followed. By 16th January 1884 healing had proceeded very completely, the whole surface being cicatrized over, with the exception of a small portion at its upper extremity, and a linear surface along its left border. With the exception of a small surface to the left posteriorly, the whole surface appears healthy. The patient volunteered the observation that she had never felt better in her life.

January 20th.—The small surface whose condition appeared doubtful was to-day lightly touched by the thermo-cautery knife. Patient was dismissed cured on 24th January 1884.

It will be gathered from the histories of these cases that they were too far advanced when they first came under observation to enable us to watch the mode of onset of the disease. But the account as given by the third patient is quite in accordance with what we know of lupus generally. It will be noticed that the patient observed the appearance of spots upon the vulva, which spots latterly broke into open sores. In this statement we have doubtless the patient's method of expressing the fact that certain elevated tubercles were found, which broke down and ulcerated, and from their situation an extension of the ulcerative process took place. From microscopic examination we have reason to know that the two nodules at the anterior commissure were rather of the nature of huge warts, and contained no true lupoid tissue. But that both labia were the subject of lupoid degeneration we have convincing evidence in the two microscopic preparations which Dr Chapman has made for me, and which I now show you. In them you will observe the peculiar large round cells of lupoid tissue lying in a matrix of connective tissue. You will also see in one of them the manner in which the actively proliferating epithelial tissue is throwing its arms around so as to embrace these bundles of round cells. Apart altogether from the clinical evidence, there is sufficient microscopical evidence to warrant a diagnosis of lupus, if that had been needed. This leads me now to what is the most important question connected with this rare condition, I mean the diagnosis of the diseased condition.

Into the question of the nature of lupus I will not enter here in detail, as there seems to be no essential difference between this affection and the same disease when attacking the face, or any other part of the surface. I will therefore content myself by stating that it appears to be an affection of the true skin, whether originating in the cutis, in the rete malpighii, in the sweat glands, characterized by a tendency to the formation of rounded points or tubercles, by proliferation of large round cells in a matrix of soft connective tissue (some of the cells assuming giant proportions). These tubercles, which vary in size from that of a pea to a bean, as they increase in size break down by suppuration, and leave an angry ulcer, which tends to spread and has little inclination to heal, and is extremely liable to break out afresh after it seems to have been cured. Various efforts have been made to connect lupus with certain cachetic conditions, such as syphilis and scrofula. The latter view is especially common among the French authors. But the attempts hitherto made in that direction appear unsuccessful. At any rate, in considering the three cases which form the subject matter of this paper, neither the taint of syphilis nor the slightest evidence of any tubercular or strumous condition could be detected. It would appear, therefore, that lupus must be looked upon as a local and not a general affection, its origin having to be sought for in some local irritation. It is a curious fact that in one of my cases, the third, the disease was traced to an injury sustained by the vulva through a fall, when compared with a similar experience recorded by Huguier. One of his cases traced the commencement of her illness to a fall, during which the vulva was struck against the corner of a stool.[1] These facts point to local injury as a possible starting point.

An exceedingly interesting argument is urged by Huguier, *loc. cit.*, in explanation of the frequency of lupus in the face and vulvo-anal region, which is to the effect that, anatomically and physiologically, these regions have very much in common. Of the condition as affecting the vulva, I cannot do better, I think, than translate a statement from Huguier's memoir, which puts the matter much better before you than anything I could myself produce. It runs as follows:—

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[1] Mémoire sur l'Estiomène, *Mémoires de l'Academie de Médecine*, t. xiv. p. 508.

"This chronic malady, which holds a middle position between the elephantiasis of the Arabs, syphilis, cancer, and scrofula, whilst it is not essentially of this last nature, is characterized by the leaden or violet tint of the parts, their disfigurement, induration, and engorgement, their ulceration, destruction, hypertrophy, and simultaneous infiltration, in such a manner that the orifices and canals presenting themselves in the vulvo-anal region may be at the same time ulcerated, enlarged, and contracted, their furrows and cutaneous furrows and foldings more developed, thickened, and the seat of ulcerations and cicatrices more or less extended and deep, without continuous or darting pains, without directly threatening life, or even for long without inducing a marked effect upon the constitution."

I need only refer to the cases which I have already recorded in evidence of the extremely persistent nature of this affection. Case I. shows the extreme degree of destruction of tissue that is capable of being suffered by a patient under the influence of this dire and disfiguring disease; whilst Case II. and Case III. show the troublesome deformity and persistent destruction of tissues that follow in the wake of even an ordinary case of the disease. All of them also combine to prove the extraordinary disproportion between the feelings of pain and discomfort and the amount of ulceration and swelling. Case I. proves in its history that the bowel, for example, may at one time be contracted by the disease, at another dissected out and left loose. All of them, but especially the first one, prove the extremely chronic nature of the ailment, as well as the purely local and non-infecting character of it. In none of these cases was there any glandular infection. But all combine in demonstrating the fell career of deformity and destruction which follow in the wake of the disorder, if left uncared for. Indeed, speaking of this matter, Dr Isaac E. Taylor states that he believes the deformity and disfigurement resulting from the ulceration and cicatricial contractions of a vulvo-anal lupus are greater and more disgusting than the corresponding changes which this disease effects on the face. From what I have seen of the disease, I am inclined to agree with him. It will be noticed that as it creeps over the anterior edge of the perineum its tendency is to extend a small distance into the vagina, and in this situation the hypertrophy is not nearly so marked as when the disease passes anteriorly so as to invade the labia. The appearance posteriorly is that of a shallow ulcer, with edges very distinctly indurated, but not overhanging. Anteriorly, the ulceration burrows deeply below the tissues, and its edges are bounded by hypertrophied polypoid-looking masses of tissue invaded by lupoid elements. It is observed that the disease is slow to enter the vagina. In both my Cases II. and III. it did not extend above an inch into the vagina, whilst it invaded the perineum and the vulvar region in both cases, especially in the last, very freely.

Diagnosis.—The diagnosis of this affection is of very great importance, and requires careful consideration, as it is apt to be mistaken more especially for specific disease and for epithelioma. Indeed, there is reason to believe that before Huguier published his classic memoir on the subject in 1848, the disease was constantly mistaken for one or other of these diseases. First to distinguish it from epithelioma of the vulva.

1. Epithelioma gives rise to a more stony hardness than lupus does, and is not accompanied by the peculiar tendency to hypertrophy of the adjoining tissue.
2. Epithelioma never forms an open sore for months and even years without infecting the glands in the neighbourhood, or inducing secondary malignant disease in some distant organ.
3. Besides, when epithelioma does ulcerate, it does not give rise to the deeply-excavated ulcers with overhanging edges which lupus does, but to a more shallow although angry-looking surface.
4. It is seldom that epithelioma persists long in the vulva or elsewhere without giving rise to pain, especially of a lancinating character, and this is particularly not the case with lupus.
5. The microscope may be employed in case of doubt, when the portion removed, if from epithelioma, will show the characteristic cancer cells, whilst the lupus will exhibit lupoid tissue.
6. In a case of long-continued lupus the fact of its prolonged duration, without deeply affecting the constitution, is itself conclusive evidence against the possibility of its being any form of malignant disease. But I believe the *greatest difficulty* is to get the medical adviser to think of lupus as a possibility. The appearances of vulvar lupus with hypertrophy (and that is the only form which I have as yet met with) is so striking, that I do not think a well-educated medical man who had once seen the disease, or had read a good description of it, could have serious difficulty in making it out if he only thought of it as an alternative. That result can, of course, only be brought about by bringing the subject before the profession as opportunity offers cases.

From Syphilitic Ulceration.—I speak with considerable hesitation on this point, as my experience of such diseases is not such as to warrant my being dogmatic. The history of the case ought to be carefully scrutinized, and the possibility or probability of constitutional syphilis investigated. If the result is negative, it is in favour of the non-syphilitic character of the affection. M. Huguier enters at considerable length into the distinction between this affection and syphilitic disease. He says, "Chancres differ from esthioménal ulceration by their antecedent, which is a suspected recent coitus, by their advance and their rapid extension, by their physiognomy, their transmissibility, their ready inoculation, the condition of health, or simple inflammation of the parts which surround and support them; also very frequently by the presence of acute buboes, which very frequently suppurate and give rise to an inoculable pus. An indurated chancre does not present the majority of these characters, it approaches more nearly the esthioménal ulceration, from which it differs, however, by its slight extent, its sharply circumscribed form, its elevated situation, and the small space which the infiltration and induration of the parts which support and surround it occupy. This induration is so very limited that it forms a sort of kernel or *nodus* in the midst of the healthy parts; on the contrary, in the case of lupus the induration and infiltration which surround the ulcer are diffused and far extended.

"We must take care not to confound phagedenic chancres with lupus, as I have seen done by some persons, shortly after I had discovered this disease. It appears to us that it is enough to be forewarned to avoid the possibility of this mistake. Constitutional venereal ulcerations are extremely rare on the part of the genital organs, which lupus lays hold of. In this relation the vulvo-vaginal mucous membrane differs from that of the isthmus of the throat and of the pharynx, which is frequently affected by it. These ulcerations make rapid progress compared with those of lupus. Their base is fungous, very unequal; its tint remains grayish up to the moment when they commence to cicatrize. Their edges are red, opaque, inflamed, turned outwards without being swollen up. They produce a grayish or greenish yellow pus. At the end of some days of treatment a pus of a yellowish-white colour, thick, and very tough, whilst the ulcerations of lupus never produce anything else than a sanious serosity. They are accompanied by an induration and an infiltration of the neighbouring soft parts by contractions in the canals, lesions which we do not observe habitually in connexion with venereal ulcerations. The cicatrices of these latter form white and often projecting bands; those of lupus are flat, red, or violet. Finally, the facility and the rapidity with which incisions and even wounds with loss of substance, made on the parts which are the seat of lupus cicatrize, although they are infiltrated and indurated, establish a great difference not only between this affection and the venereal disease, but also between it and cancer. . . . . Mucous tubercles of venereal disease differ from tubercles of lupus in this, that, from the first, they present themselves, and possibly more often on the portion of the vulva covered by the mucous membrane than on that covered by the skin. They are in general more numerous, show themselves at first without injection or inflammation or preliminary thickening of the parts which surround them; whilst the tubercles of lupus are habitually surrounded and separated by portions of integument which are injected, thickened, and reddened. . . . . . If mucous tubercles proceed to ulceration, it is rather an ex-ulceration from the centre or from one of the points in the circumference of their surface, than a true ulceration. There results from these small excoriations which never pass the limits of the tubercle or of the skin, and cannot, on account of their slight extent and depth, be taken for the true ulceration which succeeds to lupus tubercle." One may gather, I think, from these observations, that the surrounding hypertrophy, the depth and extent of the ulcerations, and a careful estimate of the history, will usually suffice to separate lupus of the vulva from specific disease of that region.

The *Prognosis is on the whole* good. Of Huguier's 9 patients, 3 were cured, 2 were relieved, 2 were not relieved, and 2 died. Of West's 5 cases, 1 was cured, 2 relieved, and 1 died under chloroform, and not as a result of the disease. Of Dr Isaac E. Taylor's 7 cases, 2 were cured, 2 relieved, 2 not relieved, and 1 died. Of my 3 cases, 1 died of exhaustion after seven and a half years of the disease, 2 were, so far as we can at present judge, cured.

Treatment.—In the milder, or what is called serpiginous form of this affection, the treatment to be adopted is of a simple character, so far as I can judge. If such cases came before me, I would endeavour to remove it by the administration of constitutional remedies, such as Donovan's solution, the application of mild stimulating lotions, and the free use of scarification, as practised by Vidal in Paris, the good results of which in facial lupus I have myself witnessed. But for the hypertrophic form, or cases in which there is much and deep ulceration, I do not hesitate to state that I regard the removal of the diseased structures as a necessary preliminary to successful treatment. Care must be taken in removing the disease in the posterior part of the vagina to avoid wounding the rectum. Consequently, a different method must be adopted, according to the part of the surface we are dealing with. To meet this difficulty I remove the hypertrophied and diseased-looking hard tissue posteriorly by knife—by scissors or by gouge according as I find one or other instrument the most suitable. I endeavour to arrest the bleeding points by touching the surface with a Paquelin's cautery at a dull red heat. The base of the ulceration requires also to be freely touched with the cautery. The redundant hard tissues anteriorly in the region of the labia and clitoris I prefer to dissect off with the Paquelin cautery knife. It does its work excellently, is free from subsequent pain, and effectually arrests hæmorrhage. The raw wound is then treated like a granulating healing sore with antiseptic and non-irritating dressings. The patient is put upon arsenic or iron, or both, or other analeptic, according as such appears to be indicated. But, as both my Case II. and Case III. occurred in women otherwise typically healthy, I find it hard to believe that constitutional cause has much to do with the production of the disease, and consequently also that it can be greatly alleviated by constitutional treatment.

V.—ANTIPYRETIC TREATMENT.

By JOHN HADDON, M.D.

INDIVIDUAL opinion as to any method of treatment founded on experience must be taken for what it is worth, but, believing that the use of an agent such as cold water, so powerful for good or evil, in the treatment of febrile diseases, is a subject well worthy of study, I venture to relate my experience and the conclusions at which I have arrived.

It was in 1869 that I began, in general practice, to use cold baths in the treatment of typhoid fever, in full faith, judging from what had been written on the subject, that it was the best treatment I could adopt. I found that the treatment could be carried out with little difficulty, but the results were disappointing. The temperature could, indeed, be reduced by the bath, but it returned to its former height with, in some cases, the most disheartening rapidity; and failing to observe the great advantages claimed for the treatment, while its disadvantages were very apparent, I gave it up.

Besides the bath, I tried sponging, packing, and the use of india-rubber tubing, so arranged as to cover a considerable surface of the trunk, while a continuous stream of cold water was passing through it. I observed no benefit from the tube or sponging, but was satisfied that the cold wet pack was of use in many acute febrile diseases, although a pack did not reduce the temperature more than a single degree. The shock given to the patient by the wet sheet, appeared to be as great as being put into the bath, and though it made very little difference to the temperature of the patient, improvement in other respects could be observed, more especially on the pulse, on the intellect, and in being followed by sleep. Accordingly, the pack became the only way in which I used cold water in the treatment of pyrexia. In Hyperpyrexia, however, I still adhered to the bath; but having witnessed the effect of a cold douche in such a case, I lost faith in the bath even in that state. The case was as follows:—I was sent for hurriedly to see, for the first time, a case of typhoid fever well on in its course—I found the patient unconscious, in a sort of convulsive tremor, with a temperature of 108°. Seeing that death was imminent, and believing that a cold bath would give him the only chance of life, I carried him to the bath-room. The bath was empty, but I laid him in and turned on the cold tap. Fearing that life might ebb before sufficient water could surround his body to make any difference to his temperature, I dashed cold water on his chest out of a tumbler. The first douche made him look up with intelligence, and his symptoms had greatly improved before there was any quantity of water in the bath. Struck with the sudden improvement which the cold douche produced in this case, and having heard of Dr

Currie's treatment, I obtained his work on the treatment of fever by cold affusion. From its perusal I determined to adopt his practice; and the first case in which I had occasion to try it was that of a boy, to whom I was called early in the morning of the second day of scarlet fever. He had a livid rash, and was almost unconscious, with a pulse that could hardly be felt. Having stripped him naked, I set him into an empty tub, and poured a pailful of cold water over his shoulders. Though he was helpless enough when set into the tub, he got out without help, and was put into bed among blankets. To my astonishment, his pulse, immediately after the water had been used, was full and about 120, and he was quite intelligent. His skin became moist, and he slept. The sudden change in the pulse and the intellect astonished me, but the perspiration, in such a case of scarlet fever, on the second day of its course, was to me the most remarkable of the effects of a single cold affusion. The temperature was reduced only one degree. The boy asked to have the affusion repeated, and his mother continued the treatment herself. For this treatment nothing is required except a tub and a pail of water, and I found adults in typhoid fever as fond of the treatment as was the scarlet fever boy. The effect of cold affusion in fever convinced me that the temperature is by no means the most important symptom in fevers, and I was confirmed in this belief by the record of the case of a young lady who, from some spinal injury, had a continuous temperature of 122°, without any disturbance of the digestive or other organs, showing, in fact, none of those symptoms for which the pyrexial state has been blamed.

Such is the story of a conversion from the belief that the pyrexia is the chief danger in typhoid fever, and that the cold bath is the proper treatment, to the conviction that pyrexia though, as a rule, a good index of the severity of a fever, is of itself by no means so dangerous a symptom as is generally believed. It is not easy to divest one's self of a long cherished belief, and it is proverbially difficult to strive against the current. Nevertheless, truth will prevail. There are some in the profession who venture to express their disapproval of the systematic use of cold baths in typhoid fever. At the British Medical meeting in the Isle of Wight, in 1881, I read a paper in which I endeavoured to prove that antipyretic treatment was unjustifiable; and during the discussion which has just taken place at a meeting of the Medical Society of London, two members, Dr Samuel West and Dr Maclagan, ventured to question the truth of the statement that a high temperature was of itself dangerous. It is possible that my conclusions may be erroneous; nevertheless, when we look at both sides of the question, I think it will be admitted that they are not without some show of reason.

Those who advocate thorough antipyretic treatment in typhoid fever, or any other disease, would require to prove, 1st, that the pyrexia is the chief source of danger; and, 2ndly, that by keeping it within proper limits by the use of the cold bath the patient's chances of recovery are increased.

First, then, has it been proved that the pyrexia is the chief source of danger? So far as I am aware no attempt has been made to prove such a statement. It is a pure assumption, without one single fact to support it; and yet, owing to its frequent repetition by those who are recognised as authorities, the bulk of the profession has come to believe that it is true, while our teachers and text-books do not fail to give effect to the general belief. Secondly, does it increase the patient's chance of recovery? Those who advocate this treatment prove by mortality statistics that it does; but statistics are not to be relied on in proof of such a statement. Take the case of pneumonia, which was the battlefield of our fathers, as typhoid fever is ours. Would it be correct to say that the expectant treatment of Bennett was the right treatment of pneumonia, because the mortality under it was so much less than it had been under the antiphlogistic remedies which were previously employed? Surely not. Some treatment may yet be found which will do more for a pneumonic lung than mere expectancy; but we would be justified in saying that the antiphlogistic treatment was worse than the expectant method, and that by giving up the lancet and its adjuvants patients had a better chance of recovery. Now, the case may be analogous with regard to the treatment of typhoid fever. Before antipyretic treatment was adopted drugs were mostly relied upon, while, when this treatment was adopted, drugs were to a large extent discontinued, and so, perhaps, the patients would have a better chance of preserving their digestive tract unimpaired, and consequently would have more strength to oppose the ravages of the fever process.

Whether or not this may account for a lessened mortality under antipyretic treatment, which we may grant for the sake of argument that statistics have proved, there is another question that is worthy of consideration.

We may presume that putting a patient suddenly into cold water will have the same effect as putting the cold water suddenly on him. I have shown how beneficial cold affusion is, and I believe hot affusion would have exactly the same effect, judging from their almost identical effect on a healthy person. Is it not possible, nay very probable, that the good effect of a cold bath is in the sudden shock which immersion gives to the system, and that the bad effect is produced by the continued immersion? This seems a question well worthy of being inquired into, and, if found to be true, then we would do well to return to the practice of cold affusion in the treatment of fevers, as advocated by Dr Currie in Liverpool, and used with success by Edinburgh physicians at the beginning of this century.

As to antipyretic drugs, if the pyrexia is not a dangerous symptom in fevers then their use must be abandoned, for though we know they reduce the temperature, we don't know what else they may do, but we have good grounds to suspect that they may not be without some prejudicial influence on the system.

Those who have studied the pulse by the aid of the sphygmograph in fevers, must have seen how quickly the character of the tracing changes, and been struck with its value in prognosis; and there can be little doubt that in paying so much attention to the temperature, to the neglect of the pulse and other symptoms, we are not likely to advance our knowledge of the febrile process, or guide our patients to recovery so well as we might otherwise do.

VI.—NOTES ON LABOUR IN CENTRAL AFRICA.

By Robert W. Felkin, F.R.S.E., F.R.G.S., Member of the Anthropological Institute of Great Britain and Ireland; Corresponding Fellow of the Berlin Anthropological Society, etc.

(*Read before the Edinburgh Obstetrical Society, 9th January* 1884.)

The subject which I have been requested to bring before you this evening is one of some novelty, and one which I trust may prove of interest; but before entering upon it I wish to make a few remarks to prevent misconception.

The facts which I shall present to you were observed during two journeys I made in Africa. The first journey, in 1878–80, was to Central Africa and back; the second, in 1880–81, was all round Africa, but in connexion with the latter I have only notes of what I witnessed on the east coast. It is right, also, to remark that I did not go as a fully qualified medical man, having only studied medicine for two years previous to my journeys, nor did I go as a scientific explorer; therefore there are many points in my notes which would have been more fully observed had I had the requisite training, and many others which, if ample time and opportunity had been at my disposal, would have been better investigated, and doubtless would have made my work of greater scientific value. All I have to offer you is a series of notes jotted down during my travels, amidst many inconveniences, and necessarily curtailed by the speed with which I travelled and the main objects of my journey.

You may be interested to know what led me to take an especial interest in the position which women occupy during labour in the various Central African tribes. One evening, after a long day's march of some 25 miles through swamp and jungle, I was smoking my pipe before a good fire in the near proximity of a native village in the Bari district. My porters all lay around me; and as they had had an unusually heavy day's tramp, the camp, for an African one, was very quiet. Presently, however, tom-toms were beaten in the village, the sound of which produced not a little commotion. As I lay wondering what was the matter, my dragoman (who, I suspect, had been enjoying a little flirtation in the village) came and asked me if I should like to see a woman cut open. My curiosity was aroused, and I went with him. As we traversed the two or three hundred yards which intervened between us and the centre of the village, he told me that a woman who had been in labour for two (?) days had been given up by the women and turned over to the men; or, in other words, as the women had failed to deliver her, the men, according to custom, were going to cut the child out. Arriving before the hut, we found it surrounded by a small crowd of men and women, the former vigorously beating tom-toms, the latter uttering loud, piercing cries. A word or two from my guide gained for me an entrance; and, stooping down, I crawled through a low doorway into the hut, and by the dim light of the fire I saw two women sitting on the floor back to back. Their arms were interlaced (see Fig. 1), and the one facing me, who was evidently the parturient woman, had her legs slightly flexed and drawn up. She exhibited signs of extreme exhaustion, and her tongue protruded from between her gums, for her upper and lower incisors had been removed at puberty, as is the very general custom in Central Africa.

We had evidently arrived only just in time, for in one corner of the hut a grass bed was being prepared by two women, while an elderly man, whose dress proclaimed him to be a magician, was engaged in sharpening an ugly-looking knife. Anxious, if possible, to save the woman's life, I requested permission to examine her. This was strongly objected to on the part of her friends, she herself being too unconscious to have any say in the matter. However, after the promise of some cloth and beads, they permitted me to do as I wanted, and I found a simple case of uterine inertia. After carefully considering the case, I made up my mind that it was possible to deliver the woman; and after many difficulties, which I need not detail, I persuaded the people to allow me to operate, and sent for my forceps. While these were being fetched the people insisted upon the woman being taken out of the hut. A large bonfire was hastily constructed, and a crowd of natives pressed round to see the "white man's medicine." I must confess that I was not a little nervous at having to perform before such an audience; but all went well, and I had the satisfaction of bringing a very fine boy into the world, at which the natives were not a little astonished. Six or seven months afterwards I had the pleasure of seeing the woman and her boy again, both in good health. Noticing the extraordinary position in which I found this woman, I inquired if it were the usual way in which women were delivered in that tribe, and was told that it was, their female friends taking it in turns to assist.

This episode made me curious to find out what various positions were occupied by women when in labour among the different tribes with whom I came in contact; and after this, whenever it was possible, I made inquiries upon the subject, the results of which I will now proceed to lay before you. I may perhaps here mention that usually children are not permitted to be present during labours; but the rules as far as adults are concerned vary very widely in different tribes: in some men and women alike are present, in others men are absolutely excluded. But I think that it is just to the natives to state that, as a rule, they conduct their labours in seclusion. The more naked the tribe, the more decent is the behaviour of the people; and nowhere have I seen greater indecency than in Uganda, where it is death for an adult to be seen naked in the streets, but when in the huts all the members of the harem are perfectly nude, save perhaps a circle of beads round the waist, and where the most disgusting dances and customs obtain. Many a time I have been denied admission during a labour; but I must confess that not unfrequently I have gone by stealth and acted "peeping Tom," but I hope with better motives than his. At other times it was only by presents and my reputation as "hakim" that I overcame the aversion to my presence. I failed completely in all endeavours to see Arab women in labour, but I believe they use the old obstetric chair with a sloping back.

In the Madi district, as soon as a woman thinks that she is near the time of her delivery she abstains from meat, but eats a good deal of vegetable food. She gets a neighbour to help her to clean out her hut, sends her children, should she have any, to a friend, and when labour commences she walks round her hut while her friends place a deep layer of dry sand a short distance from her door. Sometimes two good-sized stakes are driven into the ground about two and a half feet apart, and the sand slopes down to them. The woman sits down on a skin placed upon the sand, places her feet against the stakes, and clasps her legs with her hands, her arms being inside her knees. Her friends take it by turns to support her back (see Fig. 2), and at times aid her by pressing or rubbing her abdomen. Another friend squats down before her to receive the child as soon as born. The sand, of course, moulds itself to the woman's body, and, being well pressed down in front, might almost be said to support the perineum. Sometimes, instead of a woman supporting the back, a firm mound of sand is made to do so (see Fig. 3). This latter custom also obtains in the Kidj country. A fire is kept burning in the hut, and a very thin porridge of millet-seed is given the woman at short intervals. She keeps very quiet, and often never moves from her first position until after the child is born. Her friends keep up a low chant all the time, and do all they can to encourage her. The cord is cut, at about four inches from the child's body, by a stone knife, as a rule, but sometimes it is bitten. Should it bleed, the woman who has charge of it takes the cord in her mouth and squeezes it between her teeth till all hæmorrhage ceases: they never tie the cord.[1] The placenta is buried outside the hut, that of boys on one side, and that of girls on the other.[2] When delivery of the placenta is over, the mother is moved to the side of the fire, where she lies down on a bed of grass covered with skins. The vernix caseosa is removed from the newly-born child by gentle rubbing, and then the child is smeared with oil and wrapped in a soft skin; after which it is shown to the father and friends outside the hut, and in about an hour after birth it is put to the breast. I may perhaps mention here that in nearly all the African tribes that I visited the custom obtains of drawing out the nipples for some days before the expected birth of the first child: that this is needed Fig. 4 will show.[3] In three or four days after delivery the mother goes about her usual occupations. On her first appearance she sits for a whole day in front of her hut, receiving the congratulations of her friends. She is not permitted to eat meat for a week or rather more after her confinement. She suckles her child for two years, and for about six months after its birth has no connexion with her husband.

In this part of the country the women sometimes bring forth their children when on the march, and then continue marching; but this is by no means of frequent occurrence, and is guarded against as much as possible. I have known it happen on two or three occasions, but the result in one case was fatal to the mother: violent hæmorrhage occurred after she arrived in camp, and she died very rapidly. As far as I know, labours are by no means so very easy in this part of the world, and are certainly not the painless, pleasurable affairs which some writers would have us believe. When a hard labour occurs and a woman remains a very long time undelivered, the aid of a man is called in. He, however, uses no instruments; and should he fail, which, I was informed, hardly ever happens, mother and child perish, for abdominal section is not in vogue here. I was unable to ascertain what means the man employs to assist delivery.

Figure No. 5 shows how a woman who had remained a long time in labour was assisted by a man at Kerrie, on the White Nile. As will be seen from the picture, two stakes are driven into the ground just *inside* the door of the hut. The woman sits on an inverted bowl placed in the doorway, her feet being firmly placed against the stakes, and holding the side-posts of the door with her hands. A broad fold of bark cloth is placed round her abdomen. A man lies down on the ground at a convenient distance behind her, places his feet so as to fix the bony pelvis, and makes intermittent traction on the cloth. A female friend sits in front of the woman to receive the child; she has been left out in the drawing, and part of the hut wall has been taken away to allow the position of the woman to be better seen. In this district the semi-erect posture is the one usually occupied by parturient women.

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[1] This applies to all districts alike. [2] This is the case in Uganda likewise.

[3] This figure is from a photograph taken on the spot by Herr R. Buchta of Munich.

Here, too, another custom is prevalent, which is illustrated in Fig. 6. A hole is dug in the ground, in which a fire is lit; on this fire a pot is placed, containing a decoction of herbs: the woman squats over this, and allows the steam to moisten and soften the passages. It is held in great repute for making labours easier.[1]

I may here mention that a like plan, other plants being used, is very generally adopted by Arab women, and natives married to Arabs, before coitus. It is said to contract the parts and cause great desire. Whether the Arab women have learnt this practice from the natives, or *vice versa*, I am unable to state.

Figure 7 represents the position occupied by the women in the Moru district. As will be noticed, they go in largely for stimulants. A jar of native beer, made of millet-seed, is placed beside them, into which a drinking-tube is inserted, the neck of the jar being filled up with leaves. The woman can thus suck at her ease, and by the time the child is born she is generally in a "happy condition." The bed on which the woman lies is very well constructed of dried grass cut into lengths, and each layer occupies a different direction. At the top a mat is placed, on which the woman reclines, placing her feet against the side of the hut.

In the Bongo district an altogether different custom prevails. A branch of a tree is laid horizontally between two other trees, so that a woman can just grasp it firmly (see Fig. 8). In the intervals between the pains she walks up and down at a slow pace; as soon as a pain comes on, she seizes the branch with her hands, places her feet apart, and then bears down. A friend squats before her to prevent the child falling to the ground. From the way in which the branch is fastened to the trees, it would seem that this arrangement is a pretty permanent one. It is also the custom here for both mother and child to have a bath as soon as delivery is well over. A troop of friends, singing and uttering loud joyful cries, accompany the woman into the water. The placenta is carried by a woman, who dances in front of the party, and it is thrown into the stream as far off as possible.

A somewhat similar custom is in vogue in the Longo tribe, but here a slanting pole is used; one end rests upon the ground, the other against the forked branch of a tree. Figure 9 shows the position of the woman and her attendant, but here the patient does not walk about. Figure 10 is from the same place. In cases of lingering labour or retained placenta they knead the abdomen. During the operation the woman occupies the recumbent position, her friend kneeling beside her. In this part of the country, as also in Unyoro and Uganda, I had great difficulty in seeing the women when in labour; their friends much objected to it, and often presents of cloth would not prevail on them to permit my being present.

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[1] I do not know the plants used. I had samples of them as well as others mentioned elsewhere, but they all got lost or spoilt *en route*.

In Unyoro most of the women are delivered in a squatting position. Fig. 11 depicts this. A stake is driven firmly into the ground; the woman walks round it in a circle until the commencement of each pain, when she squats down, supporting herself by the stake. Should the placenta not come away readily, they appear to have the invariable practice of pressing or kneading the abdomen with a broad-ended pole. This pole is cut a convenient length, and, placing one end on the ground, the woman presses the other against her abdomen; then, swaying her body gently backwards and forwards, she makes a rhythmical pressure on the fundus uteri. This is represented in Fig. 12.

In many of the Schuli villages they have what one might call an "obstetric chair," which is shown in Fig. 13. A log of wood is placed close to the trunk of a tree: this forms the seat, and a little grass is placed upon it, covered with a skin. Its height is about 3½ feet from the ground. About 2 feet in front of this log, and some 2 feet from one another, two stakes are driven into the ground, each stake having a notch about 1½ feet from the ground. The parturient woman sits upon the log, places her feet in the notches on the stakes, and clasps with her hands the upper part of the wood. After once taking her seat, she rarely leaves it till after the birth of the child.

Figure 14 represents a woman in the same district who had a lingering labour, said to be caused by the rigidity of the external passages. In this case, as in one before mentioned (see Fig. 6), a hole was dug in the ground, a fire lit in it, upon which herbs were thrown, emitting a dense vapour. It will be noticed that in this picture the woman's chest rests on a log of wood. I was told that occasionally women are delivered in this position.

Figure 15 represents a labour scene in the Wakamba district, East Africa, where the women assume a semi-erect posture, being supported by the legs and arms of two assistants. Here and in the Waniki tribe women are at times cupped when in labour. The rough knives used, and cupping-glasses made of cows' horns, are very curious.[1]

Figure 16 shows a common method of delivery on the east coast, as also in Darfour, Central Africa, where the women simply lean against the wall of their huts, generally outside, as the huts are in many cases not high enough for that position to be assumed inside. Where only very low huts are built, a tree is used as a support.

In Uganda the natives possess beds (called kitanda), a rough framework of wood laced with cowhide. The women are, as a rule, delivered on their backs, the foot of the bed being placed near to the wall of the hut, so that the woman can rest her feet against it. So far as I know, Uganda is the only country in Central Africa where abdominal section is practised with the hope of saving both mother and child. The operation is performed by men, and is sometimes successful; at any rate, one case came under my observation in which both survived. The knife used is represented in Fig. 19.[1] It was performed in 1879 at Kahura. The patient was a fine healthy-looking young woman of about twenty years of age. This was her first pregnancy. I was not permitted to examine her, and only entered the hut just as the operation was about to begin. The woman lay upon an inclined bed, the head of which was placed against the side of the hut. She was liberally supplied with banana wine, and was in a state of semi-intoxication. She was perfectly naked. A band of mbugu or bark cloth fastened her thorax to the bed, another band of cloth fastened down her thighs, and a man held her ankles. Another man, standing on her right side, steadied her abdomen (see Fig. 17). The operator stood, as I entered the hut, on her left side, holding his knife aloft with his right hand, and muttering an incantation. This being done, he washed his hands and the patient's abdomen, first with banana wine and then with water. Then, having uttered a shrill cry, which was taken up by a small crowd assembled outside the hut, he proceeded to make a rapid cut in the middle line, commencing a little above the pubes, and ending just below the umbilicus. The whole abdominal wall and part of the uterine wall were severed by this incision, and the liquor amnii escaped; a few bleeding-points in the abdominal wall were touched with a red-hot iron by an assistant. The operator next rapidly finished the incision in the uterine wall; his assistant held the abdominal walls apart with both hands, and as soon as the uterine wall was divided he hooked it up also with two fingers. The child was next rapidly removed, and given to another assistant after the cord had been cut, and then the operator, dropping his knife, seized the contracting uterus with both hands and gave it a squeeze or two. He next put his right hand into the uterine cavity through the incision, and with two or three fingers dilated the cervix uteri from within outwards. He then cleared the uterus of clots and the placenta, which had by this time become detached, removing it through the abdominal wound. His assistant endeavoured, but not very successfully, to prevent the escape of the intestines through the wound. The red-hot iron was next used to check some further hæmorrhage from the abdominal wound, but I noticed that it was very sparingly applied. All this time the chief "surgeon" was keeping up firm pressure

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[1] These were produced at the meeting.

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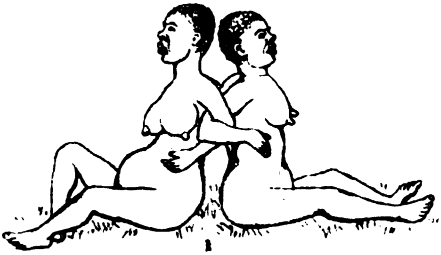
[1] The knives, mats, tom-toms, drinking tube, etc., mentioned in various parts of this paper, were all shown at the meeting, but drawings could not be made of so many articles.



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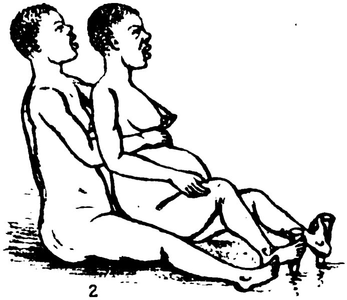

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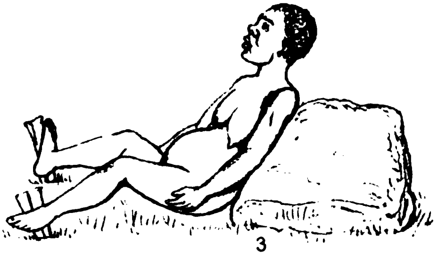

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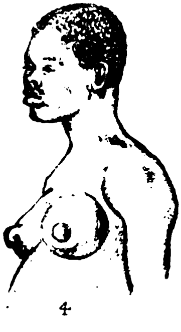

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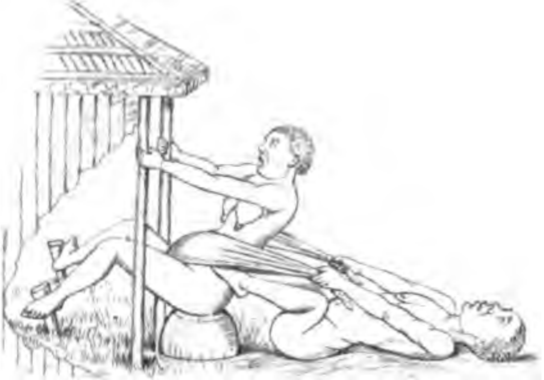

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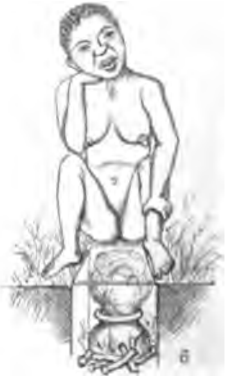

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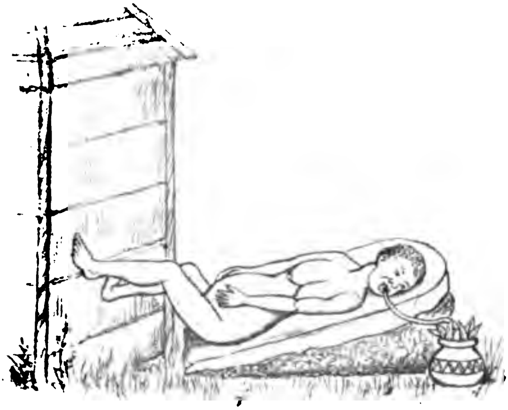

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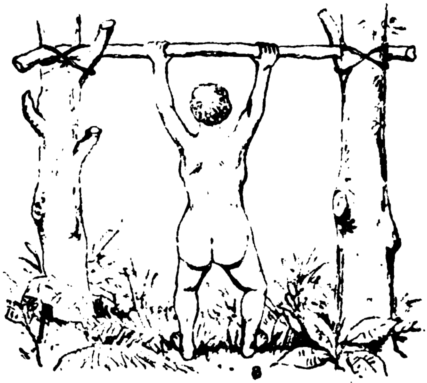

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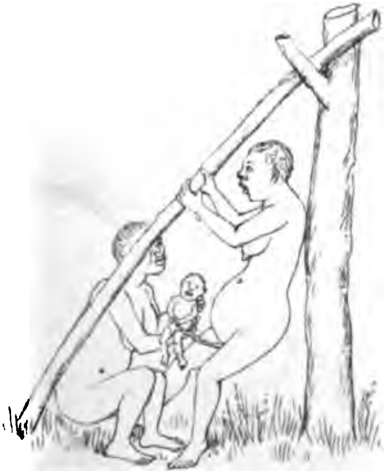

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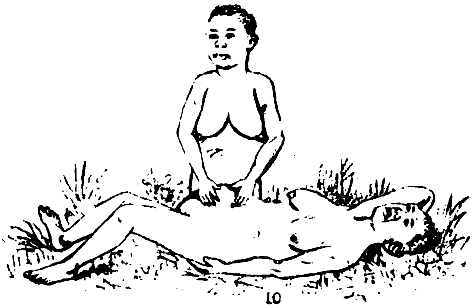

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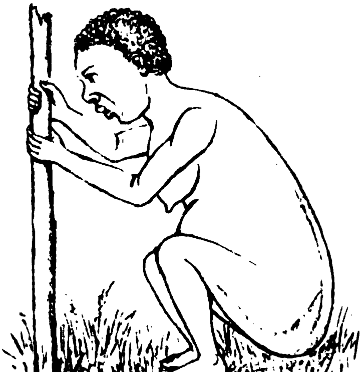

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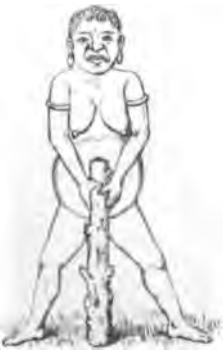

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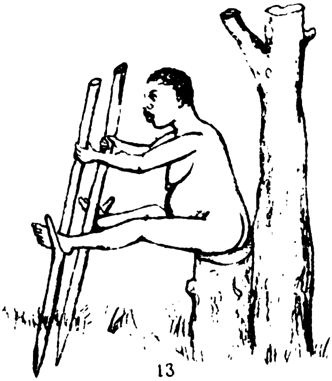

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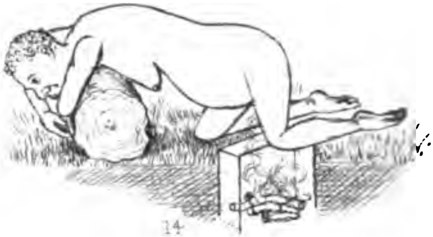

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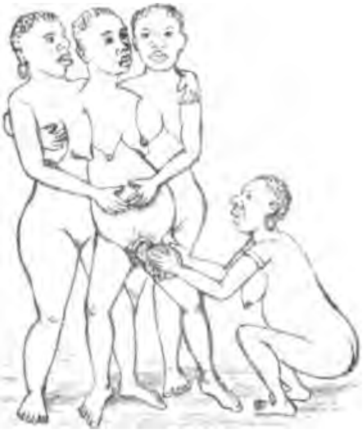

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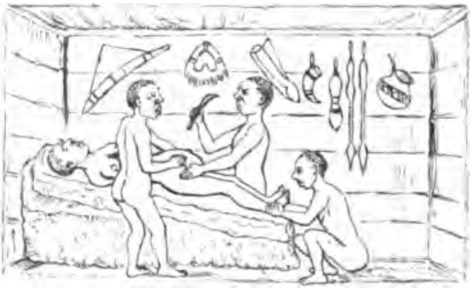

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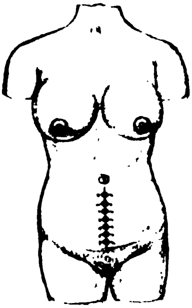

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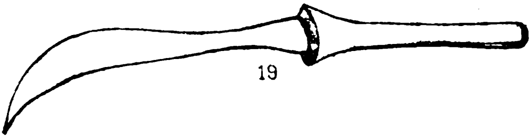

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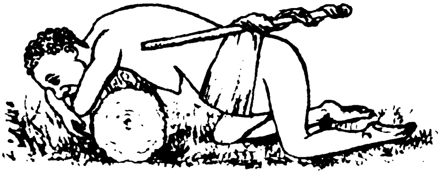

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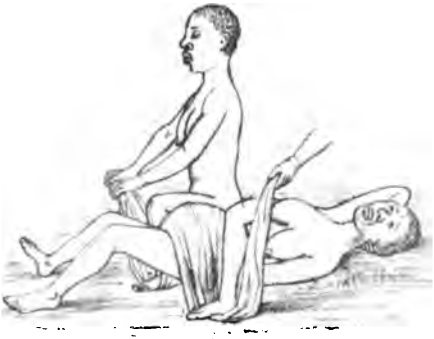

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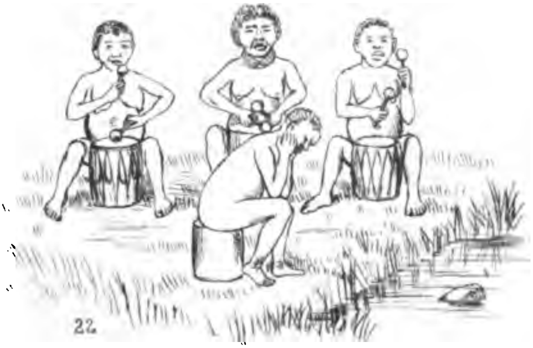

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on the uterus, which he continued to do till it was firmly contracted. No sutures were put into the uterine wall. The assistant who had held the abdominal walls now slipped his hands to each extremity of the wound, and a porous grass mat was placed over the wound and secured there. The bands which fastened the woman down were cut, and she was gently turned to the edge of the bed, and then over into the arms of assistants, so that the fluid in the abdominal cavity could drain away on to the floor. She was then replaced in her former position, and the mat having been removed, the edges of the wound, *i.e.*, the peritoneum, were brought into close apposition, seven thin iron spikes, well polished, like acupressure needles, being used for the purpose, and fastened by string made from bark cloth (see Fig. 18). A paste prepared by chewing two different roots and spitting the pulp into a bowl was then thickly plastered over the wound, a banana leaf warmed over the fire being placed on the top of that, and, finally, a firm bandage of mbugu cloth completed the operation.

Until the pins were placed in position the patient had uttered no cry, and an hour after the operation she appeared to be quite comfortable. Her temperature, as far as I know, never rose above 99°·6 F., except on the second night after the operation, when it was 101° F., her pulse being 108.[1]

The child was placed to the breast two hours after the operation, but for ten days the woman had a very scanty supply of milk, and the child was mostly suckled by a friend. The wound was dressed on the third morning, and one pin was then removed. Three more were removed on the fifth day, and the rest on the sixth. At each dressing fresh pulp was applied, and a little pus which had formed was removed by a sponge formed of pulp. A firm bandage was applied after each dressing. Eleven days after the operation the wound was entirely healed, and the woman seemed quite comfortable. The uterine discharge was healthy. This was all I saw of the case, as I left on the eleventh day. The child had a slight wound on the right shoulder; this was dressed with pulp, and healed in four days.

In the Wanika tribe, on the east coast of Africa, two means of causing the expulsion of a retained placenta are employed. In the first place, the woman is placed on her back, and a stream of water is allowed to fall on her abdomen from a height. If this be not successful, she is placed on her hands and knees (see Fig. 20), a cloth is tied round her abdomen, a stick is put through it and twisted, so as to tighten the band, intermittent pressure only being made.

Figure 21 shows the method employed in Darfour for the same purpose. There, however, the woman lies on the ground, and a band is placed across the abdomen; a woman stands on each side, holding an end of the cloth in her hands, and pressing down the bandage with one foot.

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[1] The temperature of Europeans in Africa is about 1° higher than in Europe, but the temperature of natives is less than that of Europeans. I made many observations to prove this. See *Uganda and the Egyptian Soudan*, vol. ii. page 340, for a table of 59 temperatures.

In the Nyam-Nyam tribe (cannibals) the women are delivered, if possible, near running water. The parturient woman, accompanied by her friends, goes to a secluded spot near a stream. She sits on a log of wood, her friends meanwhile beating tom-toms or blowing horns. As soon as the child is born the cord is bitten, and the child is taken and washed in the stream. After delivery of the placenta the woman also has a bath. Fig. 22 shows a group I came upon one day when out in search of a dinner.

Part Second.

REVIEWS.

Illustrations of the Influence of the Mind upon the Body in Health and Disease, designed to Elucidate the Action of the Imagination. By DANIEL HACK TUKE, M.D., F.R.C.P., LL.D., etc. London: J. & A. Churchill: 1884.

IN those days, when utilitarianism and materialism are so much in vogue, it is difficult to get a book on a medical subject of no obvious practical interest to a second edition, and the "Influence of the Body upon the Mind," would probably be a more attractive title than the "Influence of the Mind upon the Body." It may, therefore, be held a proof of the merit of the work, that it has come to a second, we might even say third edition, for before it appeared in a separate form most of the text was published in a series of articles in the *Journal of Mental Science.* There ought always to be a work on the question giving the latest and most comprehensive views on the subject which will, no doubt, continue to have an interest to many, and no modern writer known to us is better fitted to write such a book than Dr Hack Tuke. We are inclined to think that, like most authors who take up a subject with enthusiasm, he overrates the relative importance of his subject. On this point our author anticipates criticism. "It may be objected," he writes, "to a large number of the illustrations recorded in this volume that they are not recent cases, and I have heard the question asked, Why, if they happened some years ago, do they not happen now? My reply is that they do happen now—that they are always happening. Make what allowance you will for the possible deception and the certain errors in diagnosis of disease in the miraculous cures at Lourdes, make a like deduction from the recoveries occurring at the 'Bethshan' house in the north of London under the Rev. W. E.

Broadman, take off a considerable percentage from the cures performed by homœopathists as due, no doubt, to the *vis medicatrix naturæ* unaided by mental influences, and you will still have, I maintain, ample evidence of the therapeutic influence of expectation, faith, and the concentration of the attention on the seat of the disease."

Before commencing the practice of medicine the author of this review felt much interest in this subject, and read a good many books, pamphlets, and articles illustrating the influence of the mind in producing or removing diseased states of the body. Without any experience of his own to guide him, he became convinced of the great influence of the imagination and emotion upon the human frame, and hoped in the course of practice to make use of these resources of mental therapeutics, and to witness a number of new observations illustrating the action of mind upon body; but the result was somewhat disappointing. During an experience which has not been uneventful, we could not add half a dozen of stories which Dr Hack Tuke could possibly accept for his well-stored volumes. This has led us to the conclusion, that the influence of the mind on the body in diseased states of the economy is not so great as one might have inferred from reading a book like the volume before us, collected by an active observer and a learned physician, in which anecdotes have been strung together from the days of Herodotus down to those of Heidenhain. Dr Tuke adds, "It would be, certainly, quite possible to substitute for all the old cases recorded in this volume more recent examples, but to the next generation these would on the ground of age be equally open to criticism." To this it might be replied, that Dr Tuke, from his great command of the medical literature of the day, could probably supply as many new cases as would enable him to dispense with the old ones, but he would do this by drawing from a wide area, and that the number of cases witnessed by himself would not be sufficiently numerous to give as striking a selection as his learning and industry has enabled him to gather from the experience of many. We doubt that the percentage of cases where the therapeutic influences of expectation, faith, and the concentration of the attention on the seat of the disease were of any marked benefit, would never be large enough to give us serious help in our daily warfare with disease. That such influences are useful adjuncts no philosophical physician will deny.

Dr Hack Tuke quotes an experiment of Dr Durand, who by acting on the imagination of 100 patients in an hospital, succeeded in making 80 of them vomit by administering syrup of gum as an emetic. We should require to have this experiment successfully repeated once or twice, ere we should give such credence to it as to believe that an inert substance could by the influence of the imagination be successfully used as an emetic in four times out of five. The older physicians who wrote books or theses on the same subject were fonder of collecting anecdotes than sifting them, and many of their picturesque quotations are of no value as proof. Dr

Tuke remarks, that in many cases of death from emotional excitement it is impossible to determine whether lesion of the heart or of the brain has been the cause of the fatal result; and his remark is a just one, though he has been misled, apparently, by the well-known verses in Milton to give as an example the story of "that old man eloquent," for Isocrates is said to have starved himself to death on hearing of the defeat of his countrymen at Chæronea, and not to have died of sudden emotion like the old man whose son gained a prize in the Olympic games. Let any one compare the learned quarto of Pechlinus, published in 1591, with the handy volumes of Hack Tuke, and he will see not only that we live in a more critical age, but that we have superior ways of sifting the truth of a statement.

The means afforded by mesmerism or hypnotism of making the mind act upon the bodily organs, open a curious field for experiments and observation which may yet lead to something of real benefit to mankind. Dr Esdaile's experiments in Calcutta in performing painless operations on patients in the mesmeric state might have found numerous imitators had not ether and chloroform come into use shortly after.

The following case shows how the strange manifestations of hypnotism may be utilised in treating insanity. Dr Huggard, the medical superintendent of the Sussex House Asylum, had a patient, a lady of 45, labouring under melancholia with cataleptic symptoms, who refused food with great obstinacy. "Impressed with Dr Hack Tuke's paper on 'Hypnotism' and Tamburini and Sepilli's experiments on the same subject," Dr Huggard "had recourse to this agent. The dangling of a bunch of keys for a few minutes before the patient's eyes brought on the hypnotic sleep. While in this state any idea suggested was believed, and commands were obeyed. She was ordered to eat, and she ate. She was ordered to drink, and she drank. She was ordered to go through various quick movements, and she did so. She was told that she was the happiest mortal in the world, and was desired to laugh; her face lighted up, an unaccustomed smile came upon her lips, the croaking noise of unwonted and almost forgotten laughter was heard, which soon, however, with practice, softened into more natural sounds. Hypnotism was employed off and on for a week, and was then discontinued, lest a habit should be formed, but during the employment of this means marked improvement was observed which had continued, and now the lady was convalescent. In this case a new device was adopted to compel the ingestion of food. But more than this, an opportunity was afforded of reaching and exciting to action long disused nervous channels."

Dr Tuke has an overwhelming array of cases where the influence of mental anguish has caused the hair to become suddenly gray. In some instances where this change was noticed it was found that there was "an accumulation of air globules in the fibrous substance of the hair."

We should certainly not like to be suspected of the Philistinism of weighing the merits of a book of this stamp by the practical hints which might be gleaned from its pages. As a philosophical work the merit is high and the interest is great. The author severally and systematically examines the influence of the intellect on sensation on the voluntary and involuntary muscles, and upon the organic functions. He then in similar order examines the influence of the emotions and that of the will upon the organism. The fourth part deals with the Influence of the Mind upon the Body in the cure of disease. To this section we have already directed so much attention that little space is left for considering the other parts of the book, in which Dr Hack Tuke shows great learning and much knowledge in modern psychology. Any reader of a philosophical turn of mind is sure to find much entertainment from these volumes, which are a perfect treasury of curious observations and apposite comments. Dr Tuke's remarks upon the influence of expectant attention, as illustrated by the experiments of Mr Stewart Cumberland, Mr Edwyns, and others, will be read with especial interest at the present time.

A Guide to the Study of Ear Disease. By P. M'Bride, M.D.
W. & A. K. Johnston, Edinburgh.

This is one of those excellent Manuals we are always so glad to see placed before the professional public. Dr M'Bride writes in a philosophical and scientific, yet very practical manner; he thoroughly understands the physiology and pathology of the subject, and consequently has a sure and trustworthy foundation for clinical and practical work and treatment, at which he is well known to be an adept. The author is "well" cultured in regard to the literature of the subject, and no slavish follower of others, his seniors, in the department he has selected for his specialty; he gives each his due, and when necessary states his differences from any of them with good reasons for so doing.

The work is divided into fifteen chapters, the first two treating of the anatomy and physiology of the organ and of the methods for its physical examination, the remaining chapters dealing with the various diseases affecting one or other part of the ear, their diagnosis, pathology, and treatment. In describing the use of the tuning-fork as an aid to diagnosis, he puts very clearly and fully the physiological reasons upon which the diagnostic points are founded; and we quite agree with his remarks in the same chapter, that the use of bougies and tympanic catheters, which are by some passed into, and even through (or said to be) the Eustachian tube into the tympanic cavity are hardly safe, in fact quite the reverse, and may give rise to great injury to the parts about. The remarks upon auditory vertigo and tinnitus aurium are particularly valuable, though not quite new to the profession, as Dr M'Bride has already more than once written upon the same subjects in the *Edinburgh Medical and Surgical Journal*, and the *Medical Times and Gazette*; but in passing, we would quote one sentence in which, when treating of this former condition, he argues for the presence of a "vertiginous centre;" as "stimulation of a sensory nerve may cause overflow of nerve energy from its central termination, the explanation of the phenomena of an aggravated attack of auditory vertigo is easy. A stimulus is conveyed by the nerves of the semicircular canals to their central termination, and thus vertigo is produced. It is now conclusively proved by physiological experiment upon animals, and by clinical observation, that lesion of the canal causes vertiginous phenomena. The latter must be due to stimulation of an intracranial area, corresponding to the central termination of the branches of the auditory nerve which supply the ampullæ, and this fact justifies us in speaking of a vertiginous centre." In treating of the lesions which produce vertigo, he states that further experience has confirmed the view already expressed by him, that auditory vertigo is most common as a result of middle-ear disease, and explains how in tympanic affections giddiness may be produced in various ways. The last chapter deals with diseases in the course of which the organ of hearing may be secondarily affected, as scarlet fever, measles, and other fevers, diphtheria, mumps, cerebro-spinal meningitis, syphilis, etc. In an earlier part of the work he enters into the question of disease of the ears in connexion with life assurance, giving those morbid conditions which, in his opinion, should entail an increase of premium being demanded from the proposer—a most important subject. Many other points might be referred to, but we think the above remarks may enable an idea to be obtained of the nature of the work under review. Appended are some very beautifully and truthfully executed coloured lithographs, illustrating the anatomy of the parts under consideration, as also a series of drawings of the tympanic membrane in both a healthy and diseased condition. There are also presented figures in outline of the various instruments used by the author for the examination of the ear and treatment of its diseases.

The work is well got up, the author's style is pleasant, and the publishers have done their duty, so that we can honestly recommend Dr M'Bride's Manual upon the Ear as one useful to both practitioner and student, and which should have a place upon the shelves of the library of every medical man.

Clinical Notes on Cancer. By H. L. SNOW, M.D., Surgeon to the Cancer Hospital, Brompton. London: J. & A. Churchill: 1883.

DR SNOW, from his extensive experience, is one on whose statements we must place considerable reliance. But there are some of his opinions which require almost more faith than we are prepared to give. We can understand and appreciate his objection to heredity as a cause of malignant disease when he tells us that out of 358 cases of breast cancer only 54 could mention that there had been cancerous disease among their relatives, "and seven of these were doubtful." But we cannot see as clearly how Dr Snow arrives at a "neurotic origin of carcinoma." We are at a loss, even after reading Dr Snow's book, to understand how a mammary scirrhus may result from nervous depression, though we can perfectly understand how such a condition may make a person more prone to such a manifestation. Our author admits that epithelioma and breast cancer resulting from disease of the nipple are due to irritation. If so, why may not all the other forms of malignant neoplasmata arise from irritation and injury?

With regard to treatment Dr Snow is very clear in his statement,—"early and free removal, along with the contents of the axilla." We think this is proper surgery; and though we may not go as far as Mr Mitchell Banks, we would at any rate endorse Dr Snow's opinion. In cancerous disease it is by the lymphatic structures that the disease is most likely to be propagated. We know how early they become affected, and how they are always more diseased than is apparent from external examination. We therefore agree with Dr Snow that the axilla should be cleared out thoroughly much more frequently than is generally done.

Diseases of the Bladder, Prostate Gland, and Urethra. By FREDERICK JAMES GANT, F.R.C.S., etc. Fifth Edition. London: Baillière, Tindall, & Cox: 1884.

MR GANT, in his preface, states that "he has written this treatise in a purely technical form for the guidance of the profession only, and thus to render the whole as unintelligible as possible to the public." We wish this were more the rule with medical writers than it is. We are ashamed to think how many members of our profession write books on subjects that are specially "taking" with the public, that they may gain notoriety through their productions being read at clubs and libraries.

Mr Gant goes carefully and at some length over all the possible affections of the bladder, prostate, and urethra, his book being more of a systematic text-book than a series of interesting essays, like Sir H. Thomson's "Clinical Lectures." Though not so readable and enjoyable as the latter, Mr Gant's work is well arranged, and therefore specially useful to the student and practitioner for reference.

After the fuss raised by Sir A. Clark over "catheter life," we naturally turned at once to see what Mr Gant says about enlarged prostate and retention. There we found, as we expected, a very fair account of the whole matter. There is only one omission of importance that we noticed, viz., no reference is made to the advisability of using antiseptic oil for catheters in cases of retention where the instrument has to be frequently used. There is no doubt that there is a risk of septic infection of the residual urine, which is thick and contains much pus, and is just in the condition most fitted for undergoing putrefaction. In the Edinburgh school we never omit this simple but necessary precaution, and it has not been the lot of the writer to see a single case, in public or private, of unfortunate result of the Sir A. Clark type.

The chapter on affections of the urethra gives a very full account of stricture and the various methods of treatment. That on urinary deposits is particularly interesting and valuable.

On the Pathology and Treatment of Gonorrhœa. By J. L. MILTON. London: Henry Renshaw: 1883.

THE impression received on reading this work is that it might be much curtailed without diminishing its value. The early history of gonorrhœa is so obscure, and investigation into this part of the subject so unprofitable, that a few words could, with advantage, have replaced the full consideration given to it in the first chapter. Mr Milton believes that gonorrhœa was rare till the beginning of the eighteenth century in Western Europe, a view which we cannot concur in. In treating of the disease itself, the author enlarges too fully on the views of others, no doubt showing great research and extensive reading, but that is not what we want from a man of such large practical experience. We would have preferred his own opinions in a more concise form.

In our opinion Mr Milton is right, when discussing the etiology of gonorrhœa, in maintaining that the cause is almost invariably venereal, that gonorrhœa begets gonorrhœa, and is not produced by simple non-venereal discharges however irritating they may be. He thus combats, and we think with success, the accepted modern views of the French and American schools.

In treating gonorrhœa he is a great advocate for the use of injections, both with the short syringe, and when the disease is seated further back, with the long catheter-shaped one. Nitrate of silver is the favourite agent used, beginning with a strength of from an eighth to half a grain to an ounce, and raising it gradually to not less than two and not more than ten grains to an ounce. He advises the injecting to be begun quite early in the disease, a plan we do not approve of. He also recommends the old fashioned treatment of strictures with caustics, a method which in our innocence we thought was quite exploded.

That deeply interesting complication of the disease, gonorrhœal rheumatism, is treated of, but chiefly by recounting the views of others, and not as we would have wished, by throwing some light of his own on its obscure pathology. The treatment recommended here we have also found most suitable,—blisters, sedatives, and quinine.

With judicious compression, and the elimination of the innumerable references to the views of others, the book would be less fatiguing to read, and more valuable to the reader.

Clinical Chemistry: an Account of the Analysis of Blood, Urine, Morbid products, etc., with an Explanation of some of the Chemical Changes that occur in the Body, in Disease. By CHARLES HENRY RALFE, M.A., M.D., etc. Cassell & Co.: London, Paris, & New York: 1883.

THE author tells us in his preface that "this work has been written for a practical purpose, viz., to furnish students and practitioners with a concise account of the best methods of examining chemically abnormal blood, urine, morbid products, etc., at the bedside or in the hospital laboratory."

The first chapter is devoted to the organic and inorganic constituents of the animal body, the second to the chemical reactions of the chief organic and inorganic constituents of the animal body. The third treats of blood, chyle, lymph, and milk; the fourth of the morbid conditions of the urine; the fifth, the morbid conditions of the digestive secretions; and the last, of morbid products.

The work is an exceedingly valuable contribution to this important department of medical science. We have much pleasure in recommending this work to students and practitioners.

The History Album: prepared by Direction of the Collective Investigation Committee of the British Medical Association. Edited by FRANCIS GALTON, F.R.S. London: Macmillan & Co.: 1884.

Record of Family Faculties, consisting of Tabular Forms and Directions. London: Macmillan & Co.: 1884.

MR FRANCIS GALTON offers £500 in prizes to those British subjects resident in the United Kingdom who shall furnish him, before 15th May 1884, with the best extracts from their own family records; no prize will be less than £5, or exceed £50. We suppose no one will have any chance of a prize in this novel department of competition, who does not boast of an interesting variety of ancestors and collateral relations affected with hereditary disease.

We have ourselves made some inquiries in this direction, and can assure Mr Galton that Scotland is not a good country to collect such statistics. Whether the hope of a pecuniary reward will tempt our countrymen to be more communicative is doubtful. The forms given are well fitted to help such statistical inquiries, and the answers will no doubt be treated as confidential. Mr Galton's remarks upon the method of inquiry are judicious. Some knowledge of biology, if not of medicine, would be needed to answer many of the questions proposed; and if people are to be paid for doing so we should not think £5 too much for the labour and research needed in filling up the numerous tables.

Mr Galton, of course, intends to use all the materials he can obtain in this way to prepare a book. His previous works have sufficient merit to warrant us believing that some interesting information may be reached. We ourselves consider that the facts collected by old physicians in a practice which embraces two or three generations are of much more value than anything likely to be raked together by amateurs competing for one of Mr Galton's prizes.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIII.—EXTRAORDINARY MEETING.

Wednesday, 27th February 1884.—Dr LITTLEJOHN, *President, in the Chair.*

THE following discussion took place on an address by Sir Andrew Clark on Catheter Fever, which appears at page 881 of this Journal:—

Dr Patrick Heron Watson—I feel that I have been called upon to occupy an important position at this period of the evening which I think many surrounding the table might, more worthily than I, have been asked to accept. But, without further expression of vain regrets, I will at once proceed to say that I express, I am sure, only the feeling of the meeting when I state my sense of the obligation under which we are laid to the eminent gentleman who has read the eloquent paper of to-night. And in the eloquent—I may almost say poetic—remarks with which he prefaced the paper, I am sure that Sir Andrew Clark has rendered to the Edinburgh School and to the eminent teachers with whom he has been associated in the past, a just tribute of admiration for which the meeting thanks him, and with which we all entirely sympathize. The subject which Sir Andrew Clark has so ably and so eloquently introduced to our notice this evening is one which, I believe, has exercised the minds of surgeons, pathologists, and clinical teachers here as elsewhere. I am confident that the remarks which Sir Andrew Clark made on another occasion and in another place, with which we are all acquainted, and which were received by the public with the deepest interest and with the highest respect, have probably placed the matter in a more definite and crystallized form than the wandering ideas that we had permitted to enter into our minds could be expected to afford. The matter is one of great importance both as regards the health of the patient and his prospects of vitality; I think, then, we cannot express our thanks too deeply to Sir Andrew Clark for enforcing the matter on our attention. What is this condition which is the subject of discussion to-night, and which Sir Andrew Clark had designated "Catheter Fever?" It seems to me that as it has been described there is one thing to be specially noticed, and that is the introduction of an instrument along the urethra—an instrument possibly introduced once, or it may have been much oftener,—the patient having even entered for some time on what is called "catheter life,"—before any unfortunate symptoms have shown themselves. When this condition of constitutional disturbance occurs its initial symptom is usually a rigor. This is not immediately after the introduction of the instrument, but usually when the patient is first making water after the instrument has been passed. We often find, indeed, that it is not at the first time of passing water. He may make water frequently before that, but it is in the course of half a day or an entire day after the use of the instrument for the first time that these symptoms of rigors usually manifest themselves, and the rigors are followed by more or less febrile symptoms followed by copious diaphoresis, and more or less complete return to the condition in which he was before the rigors occurred. These phenomena may repeat themselves on each endeavour to micturate. Now, undoubtedly, this may be said to be the outset of what we may call the physiological manifestation of the condition called catheter fever. There is one other initial fact I wish at once to advert to before going further. So far as my own experience goes, though undoubtedly it has been limited very much to one sex, catheter fever is only met with in the male, and not in the female. In the female sex one does not meet with the rigors and fatal issues after the passage of a catheter. This has been my experience. Now, to return, in the cases in which we have these conditions existing, there are first a rigor and next the fever. The character of the fever that manifests itself may be either slight and ephemeral, or in certain circumstances it is of a much graver character. Where we have this form of fever followed by such disastrous effects as those to which Sir Andrew Clark has referred, you will find that the temperature is sometimes as high as 105° F. The fever from which the patient suffers is sometimes of an absolutely typhoid character, as that term was used by the older writers, in which the patient lies with a brown shrunken tongue, an incoherence in speech and muttering delirium. Now let us look at a few of the effects of urethral irritation as bearing on this ailment to emphasize that warning. How frequently has it been impressed on all young practitioners that a man who has the catheter passed for the first time should be in a recumbent posture! It has been said that otherwise there is a risk of his tumbling down on them; as the instrument passes through the posterior part of the canal it gives rise to a storm of the nervous system, which, inhibiting the heart's action, causes syncope, and this is in some instances followed by epileptiform seizures, with convulsive movements and twitchings of the face, the patient usually recovering when he has reached the horizontal level. In such circumstances it by no means follows that this storm is followed by any further development of febrile disturbance. But it points to a urethral factor in the disturbance of the nervous system which Sir Andrew Clark pointed to as the origin of the whole of the febrile symptoms which followed in the wake of passing a catheter. Let me, in connexion with the ætiology of such a class of cases, advert to an old established method of treatment in cases of suppression of urine, viz., to pass the catheter to set up a reflex stimulation of the kidneys. But in other instances we find that after the passage of an instrument there is no recognised disturbance of any kind. Then the rigors were probably not of a very marked kind, but it is observed, however, that there is a diminution in the quantity of urine. As in a case to which I shall afterwards refer, the patient may have passed as much as 120 ounces before he enters on his very brief catheter life. After the use of the catheter the 120 ounces were diminished day by day by 12 ounces, and at the period of his death, eight days afterwards, it was reduced to a comparatively small amount. The urine had ceased to present the aspect of urine; it presented a muddy, brownish red appearance, largely charged with blood corpuscles and pus, and a proportionate amount of albumen. But before the passage of the fatal instrument the man's urine, beyond its being large in quantity and of low specific gravity, showed nothing which would enable one to judge that the patient had some condition in connexion with the kidneys which might cause serious consequences when he entered on catheter life. Then another fact is that the patient may die very rapidly after the development of the first rigor. I have known a patient die within three days without a very marked diminution of the urine, and without the presence of any abnormal constituent except blood. This blood, which from its characters may have been presumed to be owing to some slight ruffling of the urethra in the introduction of the catheter, comes from the renal tubules, possibly from the Malpighian corpuscles. But we may find that death is much more speedily induced after the passage of a catheter. No long time ago the death of a well-known nobleman convulsed the upper ten thousand. He was a man perhaps a little nervous about himself, and he was at that period of life when it might have been supposed that he had some obstructive affection of the urinary organs. He was recommended to consult a surgeon, who passed a bougie. Thereafter he was making water all day, and he sat in front of the fire and complained of feeling ill. He was seen by a distinguished medical man, who repudiated the idea that there was anything very seriously the matter with him. He was not inclined to go to dinner, but was persuaded by his daughter to take some dinner, and with it a glass of champagne. He retired for the evening, and was found dead in the morning, his last act in life having apparently been to micturate. After death an examination of his body took place, and there was found disease of the heart, and a calcareous aorta. There is one other thing I have observed again and again in this catheter fever: when the symptoms have been far advanced and the patient sunk low, a herpetic eruption has come out on the face coincidently with recovery. How are these phenomena to be explained? Is the passage of the catheter essential to the development of any of these symptoms? I am inclined to answer this in the negative. You are perfectly aware that other conditions may give rise to it. The passage of a calculus along the urethra may cause rigors and disturbance of the system. The passing in large quantities of uric acid or oxalate of lime, the passage of urine with blood clots, or the passage of air and gas, without there being any decomposition of urine, may give rise to the development of similar results. It is a familiar circumstance that where a patient has suffered from stricture of the urethra he is liable to febrile attacks, which are spoken of as exactly analogous to ague in their nature. Such was the character of the ailment of the great Henri IV. He had attacks of rigor and fever. He was treated for ague, but he suffered from a stricture of the urethra, and the aguish attacks were symptomatic of nothing but that affection. Then there is another symptom which is not far dissevered from this form of fever, and that is the affection of the joints which sometimes follows a gonorrhœa, and known as gonorrhœal rheumatism. The time it comes on is between five and eight weeks after the commencement of the urethral disease. The knee is the joint most frequently affected, but we may have the sheaths of the tendons and other parts, and even the membrane of Descemet affected. The whole anterior chamber of the eye may be filled with flocculent matter. But the great peculiarity of it is that, though it is apparently closely allied to pyæmia, and though attended with a flocculent effusion, it is rarely or never followed by suppuration, and the joints are usually restored to their normal condition under suitable treatment. This catheter fever is not due to any severe injury that has been inflicted on the canal. We don't meet with it where the urethra is ruptured, or where false passages leading to urinary extravasation have occurred. Rupture of the bladder itself is not by any means accompanied by symptoms such as we have heard described so graphically to-night. It is not due then to absorption of urine or to any purulent condition. In other words, it is not due to uræmia nor in any way to a *quasi* pyæmia. Is it due to the introduction of septic germs ?—an idea not unnatural in those days when every disease is put down to the influence of such elements. In some cases where an antiseptic catheter alone has been employed, we do not find that these fatal results are altogether avoided; nay, I will say this, that where an antiseptic catheter has been alone employed and the patient has died, we have found numerous minute abscesses scattered throughout the cortical substance of the kidneys containing bacterii and micrococci, and I have had an opportunity of exhibiting to the Society a specimen of this condition of matters in which a surgical kidney had it so well developed that you might almost have called it a diphtheritic condition of the kidneys, ureters, and bladder. Then the condition is certainly not connected with ague, for it occurs in persons who have never suffered from such conditions. I am myself inclined to attribute it to irritation of the prostate, which causes reflex effects on a spinal centre telling with most injurious influence upon the Malpighian glomeruli, the capsules, and also the system of capillaries which pass along the tubules towards the radicles of the renal veins. In these cases, where death occurs, we may find minute clots in the vessels, and leucocytes and red corpuscles occupying the spaces between the tubules, blood extravasated into the tubules themselves with an entire absence of all epithelium from the tubules, blood in the urine, and a marked diminution in the amount of urine. As to the conditions which precede and give rise to this state of things, surgeons believe that it is met with most frequently in connexion with an enlarged prostate. I will now show a melancholy specimen of the last case of a patient's introduction to catheter life that came under my care. He was from the country, 53 years of age. He looked pallid, transparent, bloodless, and complained of constant thirst. He had been supposed to be suffering from diabetes, but on my examination of the patient I found that his bladder was distended to the umbilicus, and I came to the conclusion that the exhausted state of health was to be attributed to conditions evolved out of that. It was an antiseptic catheter that was used. For two days after introduction to catheter life he remained perfectly well. The urine diminished from day to day by 12 ounces. The last day almost to *nil*, only a little grumous bloody fluid coming away, and the patient died. The bladder is a bladder of an old-standing obstructive condition in which there is no prostatic disease. You will notice that the ureters are very much distended, that the kidneys are very large, and that there are scattered throughout the kidney innumerable small abscesses as a result of the interstitial nephritis. The specimen I think is apposite to the occasion, and may be an object of interest. Now, after all I have said, I come to the conclusion that I would rather not call this fever Catheter Fever, but Urethral Fever. It is to my mind a fever which is dependent on, it may be a catheter, or something else, a calculus, bloodclot, sand in urine, which irritates the prostatic part of the canal. In some instances this catheter fever is both trivial and evanescent in its effects, and in such cases I can agree with the deadly error into which surgeons have fallen, and say that in those cases in which the affection is trivial and evanescent the patient is suffering from no important pathological lesion; that where high fever and serious structural results occur, the dangers are chiefly to be found in a feeble heart, diseased arteries, kidney disease either original or as the result of distension from below; that in such circumstances, where this condition of fever is set up as the result of the prostatic irritation, it is the pre-existence of serious structural disease which is the turning-point in the history of the case as to whether the patient shall recover or not. The prognosis of these cases may be determined by the rise and persistence of temperature, and on a careful investigation of the patient's urine from day to day. In treatment, as we certainly find that the sudden emptying of a largely distended bladder, with probably distended ureters, is exceedingly apt to be followed by serious consequences, and the use of a rigid metallic instrument is more likely to give rise to febrile circumstances than a soft instrument, and septic consequences complicate the result, a soft catheter and an antiseptic lubricant should be used. And as regards remedial proceedings, my own experience is in favour of the employment of quinine and digitalis for some days before the first introduction of the catheter, and bromide of potash or an opiate for twenty-four hours after its employment. The use of the perchloride of iron throughout the whole period of the fever is what has afforded me the most satisfactory results, while the use of vapour baths, or hot lamp baths where the patient's skin could be got to act, I have found invaluable. I again desire to express the sense of the obligation under which the Society is laid by the very able and interesting address which Sir Andrew Clark has given us.

Professor Grainger Stewart.—After the very able speech which Dr Watson has just delivered, I shall not detain the Society for any length of time discussing the different aspects of the subject proper brought before us, or of those very interesting side issues which occurred so appropriately during the delivery of the address. There were many things on which one would gladly have the opportunity of having a prolonged discussion besides the subject of catheter fever proper, but what I have to say will be restricted to that. Of course it is but slowly that a physician gathers experience of these things. Surgeons have seen more of these cases when they have been in practice for a year or two than physicians have after twenty-five years' experience. I have certainly seen three different conditions:

—*First*, That which has been described so well, the acute rigor or other formidable symptom following the introduction of an instrument into the bladder. Such an attack cannot be attributed to anything except reflex influence through the nervous system. *Second*, There is a condition which is met with as a sequel of this operation, and sometimes results from long-standing disease in the urinary track. It consists in extensive sloughing, or a low type of inflammation of the mucous membrane of the bladder, the organ containing quantities of mucus and blood, the ureters and the pelves of the kidney acutely inflamed, and the substance of the kidney itself studded with abscesses, in fact, the surgical kidney. And *third*, between these two there is another form of disease which I have had an opportunity of studying, and to which I believe Sir Andrew Clark wished mainly to direct our attention. I think I may best speak of it by recalling a special case. Not long ago a gentleman came from the country to consult me about excessive micturition and incontinence of urine. He passed about 150 ounces every day. I found that the patient, besides his renal troubles, had disease of the aortic valves, also a good deal of emphysema of the lung, and acute catarrh of the stomach. Under treatment he improved considerably in respect of his stomach, and in respect of his heart and his breathing, I think, became easier; but the urinary symptoms continued, and I thought it right to ask a friend to draw off the urine. This was done, and the patient experienced considerable relief. The quantity of urine continued distinctly for a week to go down, and that in a favourable way. Coincidentally with the diminution of the quantity other symptoms improved. I wish to refer to this kind of polyuria. What is it that makes these patients with old-standing prostatic disease pass so much water? So far as I have been able to see, it is associated with the dilatation of the ureters and the pelves of the kidney. I have seen polyuria in a simple case of dilatation of the ureters. In that case it appeared that the hydronephrosis gave rise to polyuria. Perhaps the explanation is, that in these conditions the counter pressure upon the Malpighian tufts is diminished, a greater transudation is the result. Well, in the case of the gentleman to whom I have referred, a very favourable change went on, and he was able to return home. He had been taught to use the catheter with antiseptic precautions, for I believe in the antiseptic treatment. He came back to me about a week later. His urine had become somewhat milky, and it had a little trace of pus in it. He came again when he was manifestly unfit to come from the country at all. He went home, and died in the course of a day or two. A post-mortem examination was made by two gentlemen at my request. One of them was well accustomed to such examinations. They found that the prostate was greatly enlarged, the bladder dilated and inflamed to a considerable extent, the ureters dilated, their walls congested, and the kidney substance apparently quite natural. Now, the question comes to be, What is to be the explanation of the fever and the fatal result in such cases as this? *First,* I have no doubt that a certain influence is to be assigned to reflex action through the nervous system. Then, *secondly,* I think that some importance must be attached to general disorder of the system following on the nervous irritation. *Thirdly,* I think there is considerable importance to be attached to the septic condition. I believe that I have never seen anything that could be properly called uræmic, but there are, on the other hand, distinct evidences of what we would call septicæmia. As to the *fourth* element,—the altered state of the vessels and mucous membrane in the kidneys, ureters, and bladder,—I hold that it is also of considerable moment. Where there had been a habitual over-distension of these parts, and when it is removed and the parts fall together, there must be an extraordinary congestion of the mucous membrane. Then the surfaces of the membrane which had been kept apart come into contact with one another. Various bacterial or other elements have the opportunity of developing in the folds. This is, I believe, an important element in the disturbance, and a constitutional septic process and an irritation of the periphery of nerves may be set up. Now, with regard to management, I wish to say how heartily I endorse the recommendation of rest, and quiet, and low diet, in those who are beginning their catheter life. I also believe in the use of such remedies as Dr Watson has indicated, but unless there are good grounds for avoiding them, opiates are eminently useful.

Professor Chiene.—I need not say that, along with many others in Edinburgh, I read with very great interest Sir Andrew Clark's London address, as well as the discussion which followed that eloquent address. I listened to-night to the eloquent remarks Sir Andrew had made in connexion with the same subject, and the result of a consideration of the cases he has brought before us leads me to suppose that the patients in these cases died of septicæmia. Sir Andrew has detailed in the London address three cases—one occurring in the year 1850, one in 1865, and the third, that of a nobleman, at a later period. Two of those cases were fatal, but the nobleman recovered. He has to-night given two other cases,—one which occurred in the experience of Mr Howard Barrett, the other in that of Mr Merriman. These I must take as types of the disease Sir Andrew has so well described to us. I wish at once to say I accept his facts, and I do not wish to discuss the question in connexion with unhealthy kidneys. I accept the position in connexion with a perfectly healthy kidney, and the catheter as passed in consequence of some trouble in the passing of water. Now I have to go back in this matter to about 1865, and I have brought two preparations of the bladders of patients who died in my dispensary practice. These two patients died between 1865 and 1868; and, in the year 1869, showing the preparations to Dr Wyllie, I asked him if he could explain how these patients died? I may state that they died with symptoms such as Sir Andrew Clark has described. Dr Wyllie said he believed that I had introduced septic matter with the catheter. Although I acknowledged his explanation, I at first did not believe him. The urine looked healthy the first time I drew it off, it was healthy the second and third times, and then it became muddy and ammoniacal. The remark Dr Wyllie made was this:—"You introduced septic matter into the bladder, and the patients died." I have since observed many cases, and I have to say that I feel more and more sure that the statement of Dr Wyllie was correct. I also believe what Sir Andrew Clark has said that a person might die from irritation of the urethra, and so on. But I believe that the great majority of the cases are septicæmic; and I am very pleased to find in Sir Andrew Clark's London address the—to me comforting—statement that the urine of the catheter fever is always loaded with micro-organisms of various kinds. I am pleased to hear that fact, because it supports the theory brought under my notice by Dr Wyllie, and of which I have seen abundant evidence by clinical observation. The condition then is a septic one, and the septic matter may enter the bladder in four different ways. *First,* It may be introduced by an impure instrument. *Second,* It may be introduced also by air rushing in along the catheter. It may enter, *thirdly,* by passing along an inflamed urethra, which has been irritated by a prolonged use of instruments. We have at present a case in the wards, a man suffering from fracture of the spine, whose water has had to be drawn off. His urethra has become inflamed. A "carbolic gonorrhœa" has been set up by the irritation of the carbolized instrument. Organisms have passed along the urethra, and a putrefactive cystitis has followed. And, *lastly,* organisms may pass between the catheter and the wall of the urethra where the catheter is tied in. These are the four ways in which the septic matter may pass in; and I will just say that the methods that are now adopted to purify instruments in this city are such as to tend to the prevention of catheter fever. Sir Henry Thompson used hot water for that purpose. If you boil the catheter, and put it in cotton wool till it cools, and then anoint with weak carbolic oil afterwards, it is safe. But if you simply put the catheter into boiling water and lay it down to cool, as it cools a time must elapse before it can be introduced into the urethra, and septic organisms may have fallen upon it, and may thus be introduced along with the instrument. I believe it is better to purify the catheter with 1 to 20 carbolic lotion. This year, in consequence of observing Koch's experiments, I have used for the purpose corrosive sublimate. I have not yet found an antiseptic oil which will but slightly irritate the urethra. Lately I have tried eucalyptus oil in the proportion of 1 to 6. There is one remark I wish to make, and I trust that Sir Andrew Clark will excuse me. He has said that these points have not received adequate expression in surgical works. I have only to say that Sir Andrew will find the points I have stated in the small work which all the students in my class get as a text-book for the first part of the course; and I have alluded to catheter fever as a form of septicæmia since I became a lecturer. I endorse every word that Dr Watson has said. We are greatly indebted to Sir Andrew Clark for his address. To show the importance attached to the subject, I show a set of instruments that have been devised by one of my students, Dr A. O. Ward, in consequence of what I have taught on the subject. They are catheters, constructed so that no septic matter can accumulate in the hollow below the eye of the instrument.

Professor Annandale.—I wish to be allowed, first of all, to add my most cordial thanks to Sir Andrew Clark for delivering his address to us to-night. My remarks will be very brief and practical. In the first place, I shall confine the discussion to the object Sir Andrew Clark had in view, that is, to bring before us the special form of urethral fever, in which there is no apparent disease of the kidney can be discovered.

Sir Andrew Clark.—No apparent disease adequate to account for death.

Professor Annandale.—I am quite prepared to admit that this condition can occur, and I will direct my attention to the four causes which produce that condition, and, if you will allow me, as a surgeon to give suggestions how to prevent that condition occurring. Well, in the first place, Sir Andrew Clark has mentioned the local irritation by the passing of the instrument. I quite believe this may be the case, acting as a reflex irritation, whether the prostate is enlarged or not, and no matter what the condition of the urethra. In the second place, the second cause is the result of that local irritation on the general system. I believe in this also. The third cause is the septic results which may follow the introduction of catheter, which I also believe in; and, lastly, there is the sudden emptying of the bladder and ureters by drawing off the water. I shall now simply venture to offer the Society a few hints how to prevent these causes. The first is, never to pass an instrument into the urethra or into the bladder without some care, and without knowing something of the patient beforehand. I have learned from experience the danger of not attending to this; and I will say that when a patient comes to you suffering from stricture, symptoms of stone, or other condition, you should never pass instruments till you have inquired into his condition or history. Another point is, that in passing an instrument you should take care that it is properly warmed. I believe that mischief is often done by the introduction of a cold instrument in producing a shock of the nervous system, and which may possibly bring about some of these changes. In regard to the third cause, I am quite at one with Sir Andrew Clark, and that is that great care should be exercised in passing instruments, and that antiseptic means should be used to prevent septic matter entering into the bladder. Then as to emptying the bladder too quickly, this may sometimes be a cause of danger. Therefore I would advise that if you have a patient whom you do not know very much about, instead of passing the catheter to relieve the retention, you should rather aspirate the bladder above the pubis. I think that relieving the retention by aspiration is, in some cases, safer than by passing a catheter into the bladder. I would again impress on every one the importance of this—not to pass a catheter or instrument into the bladder without knowing something of the patient. I have known cases where patients, dissatisfied with their ordinary physician or surgeon, have gone somewhere else. They have entered the consulting room of another surgeon, had an instrument passed, and the results have been very serious.

Dr Wyllie.—Mr President, you will understand from what Professor Chiene has said, that I agree with the view he had stated with regard to the nature of most of these catheter fevers. The subject, as the Professor indicated, attracted my attention a good many years ago when I was house physician at Birmingham Infirmary from 1866 to 1868. There were then a large number of medical cases, and among them not a few suffering from debility, old age, and enlargement of prostate. I remember speaking to one of the hospital surgeons on the subject, and he added another case to the two or three that I myself had had recently under observation. He said that just a few weeks or months before he had been called to the north of England to see a friend who had been under treatment. He stated that he had passed a catheter, and that his friend was now dead. Now, in common with Professor Chiene, I have paid much attention to the subject since 1868, but I will not attempt to detail cases or to take up the time of the meeting in any way. I would simply say a few words as to the possibilities of the introduction of germs into the bladder. No doubt the common method by which germs might be introduced is in the oil which anoints the catheter, but there was also the possibility of air getting into the bladder. I have known cases in which, in an attempt to assist the bladder in expelling its contents by pressing above the pubis, the hand has been lifted up before the catheter was withdrawn, and immediately the negative pressure of the abdominal wall sucked in a quantity of air. The greatest possible care is necessary to prevent the introduction of germs. I may refer to a case that occurred in the practice of Dr Archibald Dickson, in which an old gentleman had been overcome by the shock of the Glasgow bank failure, and presently required the use of the catheter. Dr Dickson was aware of the risk of introducing germs into the bladder; but when he was introducing the catheter and pressing the abdominal wall, the patient suddenly coughed. The rectus abdominis contracted, and in so doing raised the hand. Air was sucked into the bladder with an audible sound. The result was that in this case putrefaction set in, and the patient died. These are illustrations I would like to make of the fact that it is possible to introduce germs into the bladder, even although the greatest care was taken.

Dr Joseph Bell.—I would be exceedingly loath to take up the time of the Society and keep the members from hearing Sir Andrew Clark again, but there is one point to which I would like to advert, which has not been taken up by any of the speakers, and on which I felt very strongly, in connection with Sir Andrew Clark's observations. I believe that every one in the Edinburgh School had, since the very valuable paper by Dr Wyllie, and also by Professor Chiene, of which he has with characteristic modesty said very little, I think about the year 1869—since that date I think that nearly every younger member of the Edinburgh School had tried to keep his catheters clean. By that I mean not only to wash them carefully and to oil them carefully, but to use some solution to make those catheters aseptic. I can agree with Professor Chiene that a good many of the cases referred to by other writers and by Sir Andrew Clark are cases of septicæmia caused by the introduction of germs. But I think there is something beyond that,—excluding all those cases of supposed diseased kidneys,—there are cases that have peculiar symptoms, after the introduction of the catheter, that we cannot explain by any of those things mentioned. Those cases are the ones referred to by Sir Andrew Clark in his most admirable paper. I think that the paper has helped to crystallize a great many things that have been floating about in the minds of men ever since Banks's paper. I think we have been careful when introducing the catheter into unknown urethras. I have taught this in my lectures since 1871, and I have even gone the length of having a regular drill for all the cases in which the catheter has to be used—that is to say, if I admit a patient into the wards I do not pass the instrument the day the patient comes in. The patient has his bowels cleared out, gets a dose of quinine shortly before, and is made to go to bed immediately after the catheter is passed. There are, of course, cases coming to the waiting-room that we may never see again; but if I see a man with swollen feet and swollen eyelids, showing that he had kidney disease, then we arrange with him to stay in till the next day. I must say that since that precaution has been taken I have had very few bad cases in connexion with the use of the catheter. I now come to the remark that there is a personal equation—that we have to treat each person separately—and if one is to be a successful surgeon or physician he must remember this personal equation. Some patients stand any number of instruments without bad effect, while others will have very remarkable and rapid symptoms of effects on the nervous system—pyrexia and other serious symptoms ending sometimes in death, or results like those in the case mentioned by Banks, where the patient died in a very few hours. It is very important that we should remember this personal equation of the patient, and try to find out why one man will suffer when another will not. Surgeons know that some have regularly instruments passed, probably go home and get drunk, and come back week after week without experiencing the slightest harm. When we know that a patient is not liable to suffer from catheter fever we can take liberties with him, but until we know him we ought not to do so. We ought to prepare the patient, put him to bed, and treat him as if he were about to undergo a serious operation. I think that is one of the lessons that we have learned from the most valuable address which we have heard.

Dr Bramwell.—There are one or two things I would like to bring before the notice of the Society, and they mainly, of course, refer to pathological conditions found after death, and the causes which we may presume to be at the bottom of this so-called catheter fever. I in common with most young physicians have not had many opportunities of meeting with these cases; but it so happens that at one time I had charge of a large workhouse hospital, where many cases of enlarged prostate occurred, and I remember cases in which the patients died after the introduction of the catheter. And in more than one case, after making a post-mortem examination, there were found conditions very similar to those recorded in Sir Andrew's case of 1865, where there was a sloughing or diseased condition of the bladder without any very marked alteration in the kidney condition. In common with many others, these cases attracted my attention at the time. I must say that I have not been able to come to the conclusion that the uræmic theory can be so easily disposed of as the previous speakers seem to think. There is, I think, in many of these cases a distinct uræmic element. I base that opinion on certain facts. I think we must admit that in many of the cases in which there has been long-continued over-distension of the bladder,—and these are the cases in which catheter fever chiefly occurs,—there is a distinct structural alteration of the kidney before the catheter was passed. The observations of Mr Berkley Hill and Dr Marcus Beck show that in a very large proportion of cases of enlarged prostate the kidney is diseased.

Sir Andrew Clark.—In a third of the cases exhibited there was no trace of kidney disease at all; and in the cases examined at the hospital in Paris alone about a third were found free. Those old standing cases were found free from all structural alterations in the kidneys. In 26 cases out of 66 no evidence was found of renal disease.

Dr Bramwell.—I will take it, then, that in two-thirds of the cases kidney disease was mentioned in the hospital books. I think that shows that in a considerable number of cases of prostatic enlargement with dilated bladder—I do not say in all—there must be some structural lesion in the kidney before the catheter was passed. Then I say, with Professor Grainger Stewart and others, that in many cases the sudden withdrawal of a large quantity of urine from the bladder produces acute congestive changes. I well remember a case of supposed ovarian tumour which turned out to be a dilated bladder, in which the withdrawal of a large quantity of urine was followed by profuse hæmaturea. There is a presumption, therefore, that the sudden withdrawal of the urine in cases of enlarged prostate will produce congestive changes in the kidney. In the debate in London Sir Henry Thompson stated that the dangers of catheter fever to a large extent depend upon the amount of urine which has to be withdrawn, and which remains in the bladder afterwards. Mr Harrison also stated that since he had injected antiseptic solutions into the bladder after withdrawing the urine in cases of enlarged prostate, he had not met with any cases of catheter fever. Possibly one element in the success of that mode of treatment is the prevention of acute congestive changes in the kidney. Then, again, we know that in many cases which die from catheter fever, acute septic or inflammatory changes are found in the kidney after death. The condition of the urine both before and after the passage of the catheter also seems to me to show that some structural alteration in the kidney is often present. In many cases of enlarged prostate, before the passage of the catheter, the urine is too copious, too pale, and of too low specific gravity; and, although such a condition of the urine may depend upon vasomotor changes as well as cirrhosis of the kidney, it shows that the kidney is in many cases inadequate, and unable to cope with any sudden strain which is thrown upon it. In cases of catheter fever the amount of urea, according to Sir Andrew Clark, is diminished.

Sir Andrew Clark.—Sometimes.

Dr Bramwell.—I thought Sir Andrew Clark had said always. But in these cases in which it is diminished there must be, I should think, some change in the kidney to account for the condition, for one of the main characteristics of fever is an increased production and excretion of urea. The septic theory also, I think, is deserving of considerable attention, but as Professor Chiene and Dr Wyllie have spoken on that point, I will not say more. The opinion which I have formed with regard to the causation of death after the introduction of a catheter is, that in some cases it is due to shock, in others to uræmia, in others to septicæmia, but that in the great majority of those cases to which Sir Andrew Clark particularly alludes death is due to a combined condition of uræmia and septicæmia.

Sir Andrew Clark.—I have distinctly stated that there was nothing I have ever seen of a uræmic character in these cases. Perhaps Dr Bramwell will inform us what facts in the cases show that they were uræmic. The evidence was that they were not uræmic, the fever that preceded death had nothing of the ordinary character of uræmia. It will be well if Dr Bramwell will state the facts from which he infers that death was due to uræmia.

Dr Bramwell.—I meant to say that death is sometimes due to uræmia, but that in the majority of cases such as Sir Andrew Clark has described, it is in my opinion impossible to exclude the condition of the kidney. I do not mean to imply that the symptoms are identical with those of ordinary uræmia, but that they are partly uræmia. Sir Andrew Clark has himself stated that the symptoms are partly those of uræmia, partly those of septicæmia, but not characteristic of either, and that seems to accord with my own view.

Dr Duncan.—I think that there is very little that can be added to the exhaustive discussion which has been so ably and eloquently introduced by Sir Andrew Clark. The two questions which he introduced to the meeting were—first, Why does a patient die after the introduction of the catheter? and next, What can we do to prevent it? Those seemed to be the chief points. In regard to the first question, " Why does a patient die after the introduction of a catheter?" I should be inclined very strongly to bring all the cases into two categories—one neurotic, and the other inflammatory. That there is a neurotic element which enters into the consideration of these cases there can be no doubt. The extremely intimate connexion of the urinary organs with the nervous system, illustrated by the shudder which sometimes follows the passage of the last drops of urine, explains the rigor beginning almost immediately after the passage of the catheter and death sometimes occurring, as in the case recorded by Dr Banks, within six hours—a period so short that it was impossible that any other cause than a neurotic one could be in operation. That these neurotic causes may come into force in various ways is certain. An interesting case which occurred to myself was one in which the patient had suffered for a long time from rigors which came on after the passage of the catheter and passed away. He at length died in the high pyrexia of one of them, and at the autopsy we found apoplexy in the brain. Such accidents may occur in consequence of this neurotic element. There is no doubt that reflex nerve action may in various ways cause death after the passage of the catheter. All the other causes I would be inclined to class under the head of inflammatory. I am not prepared to deny, but I doubt the cases of symptoms following mere withdrawal of an excessive quantity of urine. I have seen cases in which the pressure, very long continued, has been removed without the smallest evil resulting. One case which is brought to my mind illustrates this point. It was that of a clergyman from the north, who was sent to me by Dr Warburton Begbie, and who had suffered many things at the hands of physicians for many years. He had been treated for polyuria; and diabetes insipidus was the leading diagnosis. Dr Begbie noted that there was something else. With antiseptic precautions and great care I drew off I do not know how many ounces of water. I continued to draw it off daily for three weeks without the slightest injury to the patient, whom I endeavoured to teach the use of the instrument, but never allowing him to do it himself. After that time the patient went home with the catheter. I heard afterwards in a letter that two or three days after he went home his urine became turbid and fever followed, and he died in a few weeks. The removal of undue pressure is not one of the causes likely to occur, but inflammatory affections are. I agree with Professor Chiene and Dr Wyllie that the causes of inflammation are usually to be found in septicity; but there are other inflammatory affections independent of putrefaction. There was one case that Dr Watson may remember, which occurred when I was a house surgeon in the Infirmary 25 years ago, in which retention of urine from enlarged prostate had taken place, and in which various surgeons had endeavoured to pass an instrument, but without effect. Being of a cautious disposition, I sent for the assistant surgeon in Professor Syme's absence, and Dr Watson succeeded in passing a catheter. The patient died in a very short time, with a prostate in which we found eleven false passages. Such are cases of inflammation resulting in death in consequence of the passage of the catheter. They die of inflammatory fever, sometimes with suppression of urine. But they are rare compared with the septic cases—cases such as that of the very distended bladder in which septic influences were allowed to be introduced. So far as I am aware myself, I should attach more importance to the impurity of the catheter and the introduction of air through the catheter, than to the other two causes to which Professor Chiene has referred. The introduction of air is really important, and especially in hypertrophied bladders which do not readily contract, which have a negative pressure, which, if you squeeze, rebound. There is a considerable tendency in old prostatic cases to this occurrence. And I think that there is another class of septic cases which we must take into account, what Sir Andrew Clark has referred to as those which come from within, where local inflammation is capable of determining to the locality in which the inflammation exists wandering germs in the body. It is possible, and exceedingly likely, that septic infection may thus occur. Death may occur in various ways by inflammation. It may lead to death by inflammatory fever, by septicæmia and pyæmia; and it is possible there are other forms of toxæmia, as gonorrhœa is sometimes followed by rheumatoid affections of the joints. In conclusion, in answering the other question, it is plain, if these remarks are correct, that the points which we have to attend to locally, independent of the general treatment, are the most absolute gentleness in the use of instruments, the use of the very softest form of instruments we can employ, and the greatest possible care to prevent the entrance of septic organisms by the catheter.

Sir Andrew Clark.—I have very little to say in reply, and much more than I can conveniently say in acknowledgment. The only points offered to me for reply are in the very remarkable and very able address of Dr Watson, and in the address, also able and important, of Dr Bramwell. The only point in Dr Watson's address which calls for note is as to the term "catheter fever." I give it up entirely. It was used provisionally and temporarily, and I should be sorry if the name remained with the subject, as it threatens to do. The contention of Dr Bramwell, if I understand him correctly, is to the effect that in all such cases there is previously existing renal disease.

Dr Bramwell.—In many cases.

Sir Andrew Clark.—I had not understood that. Anyhow, I think that Dr Bramwell regards too lightly the disturbances to which I have alluded in the metabolism of the body. It is one of the leading factors in fatal issues. Another remark of Dr Bramwell's was to the effect that in such cases, particularly cases of enlarged prostate and distended bladder, we could know that the kidneys were diseased by a study of the condition of the urine. That is true and is not here contested, but such cases do not necessarily occur in middle age nor with diseased bladders. During the time that this subject has been under discussion, a case occurred in a young person that came under my notice. Coming from the Clinical Society on the night that I ventured to ask for information on this subject, one of the most distinguished surgeons in London said to me, "It is curious I have never seen a case of death due to the use of the catheter." Within four days from that time this surgeon wrote a note to me saying, that the son of one of my old colleagues was very ill, and his father wished me to see him. He told me that the young man had a slight and recent stricture; that another surgeon had treated the case, but refrained from passing the catheter; that he, desirous of giving the patient relief, passed the catheter, and that in twenty-four hours he became ill. When I looked at the patient I conjectured that the case would end fatally, and in thirteen or fourteen days the patient died. There was no enlarged prostate, no dilated bladder, and the only thing found after death was so-called purulent arthritis, and the commencement of slight catarrhal and interstitial nephritis. The interesting point is not the youth of the patient, but the condition of the urine, which I examined every day, and I make this explanation now to answer Dr Bramwell. In many of these cases, as in the case I am now relating, the urine assumed the ordinary character of a febrile urine. It diminishes in quantity, but rises in density, and deposits lithates. In this case the urine contained over three per cent. of urea, inorganic salts were present in abundance, and urate of soda was found in excess.

Dr Bramwell.—I did not mean to say that in regard to septicæmic cases, or where the kidneys are healthy, but in reference to those chronic cases where the urine is too copious, and where there is a presumption that the kidneys are in an unhealthy condition.

Sir Andrew Clark.—In those cases to which Dr Bramwell now alludes, I have not a complete and confident answer to give. The only answer I can give is this, that there are many cases of persons passing a low density of urine, and when the whole urine of the twenty-four hours is collected, there is found, by Liebig's process, to be very nearly a normal amount of urea; but certainly in other cases, as Dr Bramwell has stated, there is a deficiency, and it is certainly true that in those cases there is a liability for surgical operations to be followed by disastrous results. This is a point on which Sir James Paget has remarked very fully in his clinical lecture on the various risks of operations, and one upon which I myself have dwelt in relation to the occurrence of diseased states in renal inadequacy. In the way of acknowledgment, I have to say more than I can find time to say. The first acknowledgment I have to make is one of sincere gratitude to you, Mr President, and to the Society, for the kindly and friendly manner in which you have been pleased to receive my imperfect communication. The next acknowledgment I have to make is to thank the members of this most important Society for the great advance which has, I think, been made to-night in the discussion of the subject. Even to myself, who have thought so much about it, the subject has assumed truer proportions and a clearer position. I am sure that the discussion will exert an important influence on the profession at large, and that it will no longer be open for anyone to say that as a body we are unacquainted with what the leaders of it have long known so well.

The President, addressing Sir Andrew Clark.—I have now only to thank you in the name of the Society for having delivered so able an address to us, and also to express the hope that, as a distinguished Scotchman, you will return more quickly to the north, and give us soon again the benefit of your professional experience.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLV.—MEETING IV.

Wednesday, 13th February 1884.—Dr CONNEL, *President, in the Chair.*

I. *Dr Robert Bell*, Glasgow, read a paper on DISPLACEMENTS OF THE UTERUS, AND THEIR TREATMENT BY MEDICATED TAMPONS, which appeared at page 811 of this Journal.

Dr Angus Macdonald said that the Society had received a paper from Dr Bell on a similar subject some time ago, and at that time, he (Dr Macdonald) had expressed his strong doubts as to the efficiency of the treatment then described, and he must now say that his subsequent experience has quite confirmed this opinion. He fully recognised the value of the glycerine tampon, with or without astringents added to the glycerine as accessory in the treatment of uterine displacements, but he failed to see how it is possible that the tampon could produce the results ascribed to it by Dr Bell. In his last communication Dr Bell expressed his belief that his tampon could absorb fibroids. Dr Macdonald was glad to notice no such claim made in the present paper. He had tried it conscientiously, but he had never succeeded in producing any permanent effect which he could attribute to the tampon. Treatment more or less prolonged with the glycerine plug was, however, with him always a preliminary to the introduction of any pessary in backward displacements when there was any tenderness of uterus or vagina present. With reference to the patient whom Dr Bell had referred to, as having been enabled to bear a Hodge pessary, he could understand that the prolonged use of cotton wool and glycerine would reduce the hyperæsthesia of the organs, and enable the pessary to be borne without pain. He was inclined to attribute the good results obtained by Dr Bell rather to the general constitutional treatment than to the local application.

Professor Simpson agreed with Dr Macdonald in his low estimate of the value of this method of treatment. Gynecologists owed much to Sims for the suggestion of its use. But it is only accessory, and Dr Bell over-estimated its value as an ordinary practice. The practitioner to whom Dr Bell referred must have been well aware of its use, but time had not permitted its employment, and he was not to blame in doing as he did, in employing the Hodge pessary. Students he had for long taught its value in restoring tone and reducing congestion. They are also taught to supplement its action by the use of hot water. The Americans had further shown the value of dry packing, which had given good results in the relief of symptoms. Like most other gynecologists he had seen patients who had been apparently entirely relieved by treatment with vaginal plugs of cotton soaked in glycerine sometimes pure and sometimes medicated, but they had invariably returned for further help, unless the uterus had been retained in position by an instrument, and it was dangerous to allow ourselves to believe that such a support could be done without. He would advise Dr Bell to try dry packing, or packing with iodoform gauze, which can be retained for a much longer period, and while he cannot say that he has ever seen a case cured by this method, he has seen them much relieved, and rendered able to bear other treatment.

The President thanked Dr Bell for his paper. Three circumstances seemed to him to contribute to Dr Bell's success.—(1.) The use of the alum; (2.) The personal care and enthusiasm of Dr Bell himself; (3.) The length of time over which the treatment extended. He also thought that much depended on the employment of the cauterizing applications and the pessary afterwards. He thought that to the country practitioner the paper was a very suggestive one.

Dr Bell, in reply, said he was quite convinced of the value of the treatment in the cases he had mentioned. He might mention one other—that of a lady who had been four years under treatment by pessaries for sterility, and who became pregnant after a few months' treatment by his method. He believed that a very large part of the efficacy of the treatment depended on the use of the alum as tending to heal excoriations of the mucous membrane. He would like Dr Macdonald to try the effect in the treatment of anteversion especially.

II. *Dr Angus Macdonald* read a paper on LUPUS OF THE VULVO-ANAL REGION, which appears at page 909 of this Journal.

Dr Allan Jamieson had not seen a case of lupus of the vulvo-anal region. Such cases usually go to the gynecologist for treatment. They are rarely seen by specialists in skin diseases, and are thus scarcely mentioned by Hebra, and by him it is said to be an extension of the disease from the thigh. Lupus in this region differs from ordinary lupus, which usually occurs early in life (seldom after 20), whereas this case of Dr Macdonald's occurred at 41. It is noticeable that local injury has been recognised as preceding the occurrence of the disease in this instance. Dr Macdonald has noted also that lupus was not apparently associated with any constitutional disease; it seemed to confine itself to the skin, and not to affect other structures. It is also remarkable that most cases of lupus come from the country, and not from the town. The diagnosis is comparatively easy. There is one form of carcinoma of the skin which to some extent resembles it, viz., Paget's disease of the nipple. This was at one time supposed to be an eczema, but it has since been shown by Thin to be a true epithelioma. As to syphilis Dr Macdonald had very clearly brought out the diagnosis. It is a pity that treatment is so long delayed in many cases. There is a prevalent aversion to and dread of interfering with it. Where the disease is extensive the thermo- or galvano-cautery is the best means of removing it, when limited the sharp spoon serves the purpose well. He differed from Dr Macdonald in his recommending the removal of any part by the knife. We ought to do all we can to save tissue in these cases, and the use of the knife is apt to sacrifice tissue by reason of the cicatricial contraction which followed.

Professor Simpson felt indebted to Dr Macdonald for bringing this disease before the Society. It would have the effect of causing us to observe more narrowly the different varieties of pudendal sores, for we were always too apt to slump all cases of an ulcerative type. He may have seen many such cases, but he could only recollect one, that of an old woman, who had an ulceration of the labium similar to that of Dr Macdonald's case affecting the right side, but with no glandular infiltration. The thermo-cautery was employed in this case, no blood was lost, the wound healed well, and the patient recovered completely.

Dr Ogilvie Will, Aberdeen, wished to protest against Dr Jamieson's remarks on the employment of the knife. Instead of sacrificing tissue he felt sure that tissue might be saved by its judicious use. He thought that cicatricial contraction was much more likely to follow the use of the cautery than the knife. He had seen many cases in the Aberdeen Infirmary, and had much experience in the use of the sharp spoon, which did well in most cases. He did not regard the disease as in any proper sense constitutional. He had seen no good results from the use of internal remedies, such as the iodide of starch, which he had employed in several cases.

The President confirmed Dr Jamieson's statement of the frequency of the occurrence of lupus in the country. He had seen and heard of many cases, and found that the removal of the disease by the sharp spoon, and brushing it with chloride of zinc, were all that was necessary for the eradication of the disease when seen early. He thanked Dr Macdonald for his valuable paper.

Dr Macdonald, in reply, thanked the Society for its reception of his paper. As regards the use of the knife, he had employed it in order to avoid going too deep into the recto-vaginal septum, as he found that he could regulate the cutting by the knife better than by the thermo-cautery. He had thus used it for precision and for the saving of tissue, which were curiously the reasons which Dr Jamieson urged against the use of the knife. If Dr Jamieson had to deal with lupus in the vagino-rectal wall, he did not doubt but his practice would be that adopted by himself. He hoped that the paper would serve to draw attention to the occurrence of a rare disease, but possibly one more frequent of occurrence in the vulvo-anal region than was usually supposed, and which, while very persistent, was yet capable of complete cure in most instances. In this way he hoped some valuable and useful lives might be spared.

Part Fourth.

PERISCOPE.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

THE THEORY OF THE MODE OF ACTION OF SULPHUR.—Unna points out that with certain intervening links the skin diseases which are benefited by the use of sulphur can be divided into two classes. In the first class, of which acne, pityriasis capitis, and ichthyosis are types, sulphur should be employed in strong doses, and persistently till complete cure. In the second, of which eczema is the chief representative, if we are to test its value, it must be employed in much weaker combinations, only temporarily, and with close observation of the time when it should be replaced by some other drug, if its favourable effect is not to be reversed. This duality of action is seen also in the effect of sulphur on the sound skin. After being employed for a short time, it first produces an unnatural dryness, and finally, a weeping surface. Thus in pityriasis capitis, seborrhœa sicca, and in the desquamation during convalescence from measles and scarlet fever, sulphur transforms the loose scaliness of the surface into a smooth horny layer; and in the glossy and too firm epidermis of acne, it produces, after active use, an artificial pityriasis. In moist eczema, for a couple of days it dries and lessens inflammation. If injudiciously persevered in, it causes slight fresh outbursts of eczema. Thus it vindicates the old half-forgotten belief in sulphur as Janus-headed, when it was at one and the same time asserted that it both dried up and irritated afresh. Whence arise these remarkable influences? Sulphur in contact with the skin may originate various compounds, which may act differently. On the contrary, effects may arise from the varying duration and strength of these applications; or thirdly, sulphur may act differently on different tissues, and that change in its action may be occasioned by its being brought in contact during its continuous employment successively with deeper layers of tissue. As regards the first possibility, dry sulphur, when applied to the skin, acts merely as any neutral powder would do. The ordinary action of sulphur is comparable to that of very weak sulphuretted hydrogen, and there is pretty certain proof that this is produced when sulphur is brought in contact with the skin. Can it be proved that large and small quantities of sulphuretted hydrogen act in a manner diametrically opposed on the skin tissues? Or does this distinction consist in the action of sulphuretted hydrogen in one way on the horny layer, and in another on the young cells beneath? In order to discover the action of sulphuretted hydrogen on keratine, Unna prepared this by a complicated chemical process from fine horn shavings. This was soluble without difficulty in solution of sulphuretted hydrogen, and as the keratine dissolved the sulphurous odour disappeared, so that it is likely that a soluble keratinate of sulphur was produced. It is known that the process of cornification consists in great measure in a drying up, and it was found that the keratine of the young epidermic cells was more soluble in sulphuretted hydrogen than the older horny layer. The keratolytic property which sulphuretted hydrogen has been proved to possess is not so marked as that of dilute caustic alkalies, but is more noticeable, because sulphuretted hydrogen is more approximated to the acids, and keratine is in general (acetic acid being an exception) not soluble in acids. It is plain, however, that this keratolytic property of sulphur only explains the irritant action—that which causes eczema and artificial pityriasis. But it cannot account for the primary effect of sulphur when, employed in very minute doses, it "dries," cures eczema, and renders the epidermis smooth. This Unna explains by a keratoplastic action which sulphur exercises. It acts as a deoxidizing agent. In becoming horny the epidermis undergoes a reduction of its organic combinations, and a diminution of its vitality. Thus in treating eczema with sulphur, its employment must be discontinued as soon as the desired effect, the drying up of the weeping surface, has been reached.—*Monatshefte für Praktische Dermatologie*, November 1883.

Treatment of Herpes Zoster.—Dr Duhring observes that the most gratifying treatment is that by the galvanic current, a light current being used of eight or ten cells. After the application the patients often express themselves as being greatly relieved. As to local applications, one of the best is that of a lotion of the fluid extract of grindelia robusta, one drachm to one or two ounces. Another good lotion, and one which is useful in many other affections of the skin, is as follows:—

℞ Zinci sulphatis,
Potassæ sulphuretæ, . āā ʒss.
Aquæ, ... ℥iijss.
Alcoholis, . . . ʒss.
M.

Sig.—To be dabbed on the part every three or four hours.—*Philadelphia Medical Times*, 15th December 1883.

The Treatment of Eczema.—*In Eczema of the Hairy Portions of the Face*, Dr M'Call Anderson says that it is generally a tedious complaint at the best, so that much perseverance is required, though the ultimate result is satisfactory, and that strong local stimulants, such as the empyreumatic oils, are generally the reverse of useful. It will commonly be found that shaving the parts thoroughly every day is a necessary adjunct to other treatment. The soothing ointments usually indicated should be spread on pieces of linen, which are to be kept constantly applied, but some patients refuse to make use of them by day, which is the very time when the surface is exposed to the influence of cold winds, hot sun, irritating particles, etc., and most requires them. Under these circumstances the parts may be protected by means of Dr James Provan's tragacanth paste:—

℞ Tragacanthæ,	
Glycerini (Price), .	āā ℥iv.
Boracis, . . .	℥ss.
Aq. distil., . .	q. suff.
	Fiat pasta.

The part should be painted freely with the paste, then allowed to dry. It can be washed off with soft water. The scoops devised by Auspitz of Vienna are of great service. After shaving and applying linen spread with diachylon ointment for several days, the most prominent pustules are opened with the conical point, and then the whole surface is firmly scraped with the scoop, so as to remove all pustules, crusts, etc. This process is repeated several times a week, the parts being kept covered continually with the ointment in the intervals. In this way brilliant cures are often effected. Epilation and the subsequent use of a stimulating ointment are to be reserved for such cases as resist all other modes of treatment. In strumous cases the best results are to be expected from the use of cod-liver oil in full doses (two or three ounces per day), combined with the continuous application of the oil to the affected surface.

In *Eczema of the Edges of the Eyelids* the extraction of the eyelashes is always followed by improvement. This is far too often omitted. If the parts are much infiltrated it is sometimes useful, after the removal of all crusts, to apply a solution of potassa fusa, usually ten grains to the ounce of water, to the edges of the lids. This must be done carefully with a small brush, only moist and no more. The eyelid must then be carefully dried, else the application spreads, everted, so as to remove it from the eyeball, and the solution painted along the edge. A large brush soaked in cold water should be in readiness to stop the action when necessary. This application may be repeated every day till the infiltration, exudation, and itching subside, after which diluted citrine ointment, or Startin's red ointment, may be relied on for completing the cure.

OCCASIONAL PERISCOPE OF THE DISEASES OF CHILDREN.

By Charles E. Underhill, M.B., F.R.C.P.E., Physician to the Royal Hospital for Sick Children.

On the Value of Certain Single Symptoms for the Diagnosis of many of the Diseases of Childhood.—In a long and interesting article, Professor Politzer of Vienna has brought together a number of aphorisms relating to groups of cases in which a single symptom gives the key to the diagnosis of the disease,—not that these single symptoms are to be relied on to the exclusion of the ordinary methods of diagnosis, but in certain cases they will lead to a sure diagnosis where there might otherwise be a doubt. The several headings or aphorisms, which are freely illustrated by cases and explanations, are as follows: — 1. The presence of a very pronounced nasal or palatal character in the cry of children is in many cases the first symptom which leads to the diagnosis of a retro-pharyngeal abscess. 2. A very prolonged, loud-toned expiration, where the inspiration is normal and there is no dyspnœa, is sufficient in itself to establish a diagnosis of "chorea major." 3. The occurrence of an entirely thoracic inspiration of a continuously sighing character, indicates the commencement of weakening and paralysis of the heart's action, and in certain cases leads us to recognise an acute fatty degeneration of the heart. 4. On the contrary, an exaggerated diaphragmatic expiration, accompanied by highly pitched fine sibilations, is an important symptom for the diagnosis of bronchial asthma in childhood. 5. The occurrence of a pause between the end of an expiration and the beginning of the following inspiration, is an important symptom in the diagnosis of laryngeal catarrh from croup. 6. Habitual congenital noisy expiration of an intermittent bleating character, *i.e.*, the so-called respiratio stridula, is of absolutely no importance, and will eventually disappear. 7. This heading embraces several individual symptoms which have a special bearing on the early diagnosis of brain disease—A. A remarkable somnolence, which comes on without fever or any other disturbance, and which lasts a considerable time, is an independent initial symptom of an idiopathic brain disease, in all probability a basilar-meningitis. B. If the anterior fontanelle be raised considerably above its normal level, give a resistant feeling, and cannot be depressed, we are justified, in most cases, in assuming that an exudation has taken place within the cranial cavity. C. An unusually sluggish movement of the eyeballs, and a long gazing on vacancy, with a dazed look that does not fix itself on the object looked at, and a slow and infrequent blinking of the eyelids, is a very early symptom, and a very important one, of commencing basilar-meningitis. 8. This aphorism deals with the various forms and modes of the cry in infants, and the value to be attached to them as symptoms of special diseases. 9. This embraces a number of other symptoms which are apt to be overlooked or misinterpreted. The whole paper deserves careful study, and is full of acute observations and valuable hints; it is the outcome of forty years of able and thoughtful clinical work.—*Jahrbuch für Kinderheilkunde*, Band. xxi. Heft. 1 and 2, 1884.

TRISMUS NASCENTIUM, OR THE LOCKJAW OF INFANTS.—The author was led to investigate this subject by the occurrence of a large number of cases of the disease in Washington in the winter of 1877. Many of them were observed by himself, and he made altogether 150 post-mortem examinations. Though rare in Great Britain, trismus nascentium is in many parts of the world exceedingly common, and almost invariably fatal; there is no latitude free from its ravages. It is equally common and equally destructive in Iceland and the neighbouring islands on the one hand, and in the West Indies on the other. Among the negro races in the States, about two-thirds of the deaths which take place in infancy are due to this cause. It occurs almost equally at every season of the year, and it is not dependent, to any great degree, on poverty, dirt, and evil hygienic surroundings. Two theories as to its causation have been widely held. The first, a very old one, traces it to inflammation commencing in the navel, and extending inward along the umbilical vessels, and giving rise to a fatal blood-poisoning. The second theory, which was first put forward by Marion Sims in 1847, attributes it to a totally different cause. He asserts that "trismus nascentium is a disease of centric origin, depending upon a mechanical pressure exerted on the medulla oblongata and its nerves; that this pressure is the result, most generally, of an inward displacement of the occipital bone, often very perceptible, but sometimes so slight as to be detected with difficulty. . . . . the symptoms are relieved simply by rectifying this abnormal displacement, and thereby removing the pressure from the base of the brain." The author's experience entirely accords with this view. The cases which ended favourably, however, were very few, and these mostly were examples of *trismoid*, the chronic form of the disease; the acute form runs so rapid a course that the cases were rarely seen until they had already reached the fatal stage of extravasation. The essential features revealed by post-mortem examination were deep injection of the posterior part of the brain and spinal cord, with dotted extravasations. The spinal canal was found lined with a bloody gelatinous fluid, frequently containing numerous blood-clots. In very many cases the umbilical vessels were found perfectly healthy. That these appearances were not found in all cases is accounted for by the fact that, from the severity of the paroxysms, many die of asphyxia before there is time for the characteristic extravasation to take place. As a point of practical importance, the author insists that infants should not be allowed to lie with hard pillows or other firm substances under the back of the head, which may exert pressure upon and readily displace the easily-moved occipital bone. The paper contains a good *résumé* of the history of the disease, with a large number of references, and is well worthy of perusal.—J. F. Hartigan, M.D., *American Journal of the Medical Sciences*, January 1884.

PROOF THAT HUMAN MILK CONTAINS ONLY ABOUT 1 PER CENT.

of Casein.—In a paper on this subject in the *Philadelphia Medical Reporter* for 16th February 1884, Dr A. V. Meigs points out the want of uniformity in the results of analysis of human milk at the hands of various chemists. No two agree, at least in regard to the proportions of sugar and casein; while the results with regard to the relative proportions of water, fat, and inorganic salts are practically uniform. And, further, all agree as to the quantities of sugar and casein taken collectively, the sum of these two ingredients averaging between 8 and 9 per cent. It is in the relative proportion which they bear to one another that the widest differences exist. The method of proof, that only about one part of this 8 or 9 per cent. consists of casein, relied on by the author is that of exclusion. He takes a given quantity of milk, and, by a method which is minutely described, crystallizes out 7·224 per cent. of sugar, and from this deduces the statement that the amount of casein must be very small. "The demonstration thus obtained seems incontrovertible, for when the existence of the large amount of sugar is shown, it follows as a necessary corollary that there can be only the small amount of casein, and therefore the small amount of casein in human milk is proved."

A PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. Gibson, M.D.

Albuminuria in Typhoid Fever.—Mygge found that of 217 cases of typhoid fever, under the care of Professor Trier of Copenhagen, 52 had albuminuria, which in most instances came on before the second week, and in three patients so early as the fourth day. In 16 cases the albuminuria was transitory, and in 36 it lasted from five to eighteen days. Of these 36 patients one-half suffered from cystitis or pyelocystitis, and the rest from renal disease. Ten of those who had disease of the kidneys died. The result of the observations goes to prove that there is a true organic change in the kidneys of many patients affected by typhoid fever, but does not confirm the opinion of the French school that there is a special form of nephritis in this fever.—(*Nordiskt Medicinskt Arkiv*. Abstract in *Revue médicale française et étrangère*, 23rd February 1884.)

Hereditary Diabetes Insipidus.—Professor Weil of Heidelberg contributes an instance of inherited polyuria which cannot fail at this time to have great interest. In his wards he found a young man, aged nineteen, who proved to be the subject of diabetes insipidus. He was in the habit of passing 250 oz. of urine daily, whose sp. gr. varied between 1003 and 1004. No effect was obtained by the use of opium or arsenic, and very slight lessening of the flow was caused by the administration of ergot and injections of ergotin. He was in every other respect healthy. The patient stated that he had been subject to the condition all his life, and further, that his family contained many *water-drinkers*. Weil has bestowed great labour on the subject, with the result of finding that during four generations the patient's family had presented examples of diabetes. The great-grandfather had polydipsy; of his five children, three were affected by it; of twenty-nine grandchildren, seven were diabetic; and of fifty-six great-grandchildren, twelve were subject to the same affection,—in all, twenty-three out of ninety-one. Of these twenty-three, all were alive except five, three of whom died of acute diseases, and two of natural decay at the ages of eighty-three and seventy-four, so that diabetes insipidus cannot be said to have any evil influence upon the duration of life. The hereditary transmission of this affection has been previously studied by Lacombe, Pain, Orsi, and Gee,—the latter of whom traced it through four generations as in the case under notice.—(*Archiv für Pathologische Anatomie und Physiologie, und für Klinische Medicin*, January 1884.)

SUDDEN DEATH IN DIABETES MELLITUS.—Frerichs has observed the mode of death in 400 cases of diabetes, a considerable number of whom died suddenly. In these instances there was one common characteristic—the final coma. This, however, developed in different ways. Sometimes death was extremely rapid, and caused by a general weakness. At other times it was not so rapid, beginning with cerebral symptoms and a form of dyspnœa, with or without cyanosis, the breath having an odour of acetone or chloroform—this form lasting from three to five days. In a third series of cases the coma gradually developed and deepened without any of the cerebral manifestations or dyspnœa, but the breath had the same odour as that mentioned above. Frerichs thinks that in the first series the cause of death is paralysis of the heart from degeneration of the muscle; in the two latter groups, that it is brought about by a "diabetic intoxication," the poison of which is unknown, but the substitution products are acetone and acetylic acid.—(*Zeitschrift für Klinische Medicin.* Abstract in *Journal de médecine de Paris*, 9th February 1884.)

SPONTANEOUS ABSCESS OF THE SPLEEN.—A case of this rare affection is reported by Weil of Lyons. The malady was ushered in by rigors and copious perspirations, with pain in the splenic region. After a fortnight's illness he died suddenly, and the only structural change to be found was an abscess of the spleen.—(*Lyon médical*, 9th December 1883.)

THE CARDIAC LUNG.—Boy concludes from a study of the pulmonary parenchyma in cardiac patients—1. That there is a true cardiac cirrhosis of the lung as well as a cardiac cirrhosis of the liver, kidney, etc. 2. That this is analogous to the changes in the liver, kidney, etc. 3. That the cirrhosis is characterized by thickening of the interlobular and intralobular tissues, by dilatation of the vessels with thickening of the *tunica adventitia*, and by the constant presence of arterial lesions. 4. That the principal part in the production of this cirrhosis is played by the stasis of the blood and the permanent dilatation of the vessels, then by the epithelium (which takes us to the epithelial cirrhosis of the viscera of Charcot), afterwards by the arterial system (which supports the observations of Talamon, etc.), finally by dyscrasia.—(*Marseille médical.* Abstract in *Revue de Thérapeutique Medico-Chirurgicale*, 1st March 1884.)

HÆMOGLOBINÆMIA.—Comby gives an interesting study of this condition. Hæmoglobinuria was observed for the first time in France by Mesnet, and in this condition it has been proved beyond dispute that there is hæmoglobinæmia. Litten has, by injecting aniline, sought to separate the hæmoglobin from the globuline in the blood. The first day following the injection the animal passed normal urine, afterwards the urine became brown, and contained hæmoglobin; and later it again became normal, in spite of the presence of hæmoglobin in a separate condition in the blood. The hæmoglobinuria may therefore be intermittent, as du Cazal has shown, in spite of the permanent hæmoglobinæmia. Ponfick has pointed out that there may be hypertrophy of the spleen by the accumulation of the corpuscles which have been deprived of hæmoglobin, and in the liver the remains of corpuscles and of hæmoglobin have been found. Liebreich states that Litten causes a toxic nephritis by the aniline injections, but Litten does not think that there is any renal inflammation; the aniline being excreted by means of the convoluted tubules, not by the glomeruli. Leyden asks if there is any relationship between hæmoglobinæmia and hæmatogenetic icterus, but there does not appear to be any connexion between the two conditions. The experimental investigation is of interest, but it does not teach us yet what is the real cause of hæmoglobinæmia, which brings on hæmoglobinuria. — (*Progrès médical*, 26th January 1884.)

GONORRHŒAL ENDOCARDITIS.—Dérignac and Moussous record a case of what they believe to be gonorrhœal endocarditis. The patient, when admitted to the hospital, suffered from an urethral discharge and an arthritis of the right shoulder, which they determined, by careful exclusion, to be gonorrhœal rheumatism. The heart was examined from time to time, and found to be normal. About a fortnight after admission the temperature rose, while the pulse and precordial movements denoted cardiac erethism. On auscultation, a systolic murmur was heard in the mitral area, propagated to the axilla. The temperature soon fell, but the murmur persisted, as well as the joint affection, which caused some atrophy of the shoulder muscles. The writers of the paper believe that gonorrhœa is a specific disease due to a poison which, following Kuhne and Weiss, they hold to be a micrococcus readily recognisable by its distinctive characters, and that when the general condition of a patient is unfavourable, the disease may become general, the case recorded being an example of the endocardial inflammation which may accompany it.—(*Gazette médicale de Paris*, 16th February 1884.)

THE MEDULLA OBLONGATA IN ITS RELATIONS WITH SEXUAL DISORDERS.—Harkin contributes a valuable paper on this subject. He points out that the convulsive centre has its place in the medulla, and that there is frequently a causal relationship between epilepsy, hysteria, and allied diseases on the one hand, and disorders of the organs of generation on the other hand. In the neuropathic group of disorders he includes "neurasthenia spinalis" and "abnormal seminal losses," tracing the development from excessive peripheral irritation to irritation in the sexual centre of the lumbar plexus, which acts upon the higher centre in the medulla; and at another time the force is evolved by the higher centre acting independently of the will, and is conveyed to the irritable lower centre. In this way a vicious circle is established which causes chronic congestion of the medulla. He gives a few interesting cases treated, on this pathological conception, by wet cupping at the nape of the neck, with immediate relief and ultimate cure of the patients. In milder forms he applies a blister, and the other treatment consists in cold douches to the nape of the neck, with bromide of potass and belladonna internally.—(*The Practitioner*, February 1884.)

CONNEXION BETWEEN ABDOMINAL AFFECTIONS AND THE RIGHT SIDE OF THE HEART.—Passerini describes a consecutive incompetence of the tricuspid orifice in three cases of peritoneal effusion. This was shown by a systolic murmur in the tricuspid area, with accentuation of the pulmonary second sound.—(*Gazetta degli Ospitali*. Abstract in *Journal de médecine de Paris*, 16th February 1884.)

HYPERTROPHY OF THE LEFT VENTRICLE IN HYDRONEPHROSIS.—In consequence of a lumbar tumour, the ureters, in a case narrated by Weil, were constricted, and hydronephrosis resulted. There was hypertrophy of the left ventricle, which the author looks upon as due to the irritation of the retained renal excretion.—(*Lyon médical*, 29th January 1884.)

NEPHRITIS CAUSED BY COMPRESSION OF THE URETERS THROUGH UTERINE CANCER, WITH CONSECUTIVE HYPERTROPHY OF THE HEART.—Artaud, in describing the appearances after death in certain cases of uterine cancer with cardiac hypertrophy, seems to be ignorant of the work of Grawitz and Israel, and refers to the later experiments of Straus. He thinks that of his cases none showed any interstitial myocarditis with the hypertrophy.—(*Revue de médecine*, November 1883.)

ETIOLOGY OF TUBERCULOSIS.—Raymond and Arthaud have given complete confirmation of Koch's experiments by a series of investigations, although they did not use his methods, but those of Pasteur. They found that the tubercle bacillus grows slowly at a temperature of 25° C. (77° F.), but that the most favourable temperature for its development varies between 34° and 38° C. (93°·2 and 100°·4 F.) Exposure to a heat of 100° C. (212° F.) for an hour deprives the bacillus of all activity. The authors state that every fact which they have observed leads them more and more firmly to believe that Koch's discovery has indeed revealed the true organism of tuberculosis. — (*Archives générales de médecine*, January and April 1883.)

Part Fifth.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Medicine at the sittings held on 7th March 1884, and were admitted L.R.C.P. Ed.:—Alexander Mallagh, Barrow-on-Furness; John Smallwood Ward, Lisburn, Co. Antrim; Edwin Armstrong Fall, London; Arthur Frederic Stevens, London; George Ernest Hale, London; Charles Wentworth Hewson, Edinburgh; Edward Lamley Brockliss, Banbury, Oxon.; George Thomas, Manchester; Edward Llewellyn Luckman, Manchester; Alfred Alexander Carr, London.

GLASGOW HOSPITAL AND DISPENSARY FOR THE DISEASES OF THE EAR.—The Directors have appointed Thomas Barr, M.D., F.F.P.S., Aural Surgeon and Lecturer on Aural Surgery to the Institution in place of Dr J. Patterson Cassells, resigned in bad health; and James Erskine, M.A., M.B., C.M., etc., has been appointed Assistant Aural Surgeon to the above Institution.

MEETING OF MEDICAL MEN IN CARLISLE.

PRESENTATION TO DR TAYLOR OF PENRITH.

PERHAPS the largest gathering ever held of the members of the medical profession in the Border Counties took place in the Great Central Hotel, Carlisle, on Friday evening, February 22nd, under the auspices of the Border Counties Branch of the British Medical Association. Dr Macdougall, the President, occupied the chair; and among the members and invited guests present were the Rev. Canon Richmond, the Rev. F. Richardson, the Rev. R. Bower, Surgeon-Major Smith, Brigade Surgeon Lamb, Lieutenant Crowder, Dr Macdonald of Edinburgh, Dr Russell of Edinburgh, Mr Page, Dr Macbean of Annan, Dr Macdonald of Kirkoswald, Dr Sanderson of Penrith, Dr Montgomery of Penrith, Dr Smith of Dumfries, Dr Maclachlan of Lockerbie, Dr Mowat of Sanquhar, Dr Wright of Melrose, Dr Lorraine of Dumfries, Dr Taylor of Penrith, Dr Mitchell of Cockermouth, Dr Hodgson of Workington, Dr Maclachlan of Longtown, Dr Muir of Selkirk, Dr Stirling of Stapleton, Dr I'Anson of Whitehaven, Dr Harris of Dalston, Dr Tiffin of Wigton, Dr Brodie of Ambleside, Dr Wotherspoon of Brampton, Dr Knight of Keswick, Dr A. Macdougall, Dr Barnes, Dr Lockie, Dr Maclaren, Dr Leith Waters, Dr Campbell, Dr Macphael, Mr Hall, Dr Walker, Dr Douie, Dr Collie, Dr Arras of Wetheral, Mr W. Brown of Carlisle, Dr Harding of Carlisle, Dr Storrar of Carlisle, and Dr Lediard (hon. secretary of the branch).

The ordinary business of the branch, of a purely technical nature, having been transacted, the members and friends sat down to an excellent dinner.—Dr Macdougall again presided, with Dr Muir of Selkirk, the President-Elect, in the vice-chair. Dr Taylor of Penrith sat on the President's right.

After dinner, the usual toasts, "The Queen, and Members of the Royal Family," and "The Bishop and Clergy of the Diocese," were proposed, the latter toast being ably proposed by Dr Barnes, and responded to by Canon Richmond in an interesting speech.

Dr Lediard read the following address to Dr Taylor, which had been beautifully illuminated and engrossed by Messrs Hudson Scott. The address bore 150 signatures, and it was stated that 10 others had been received too late:—

"*To Michael Waistell Taylor, Esq., M.D., of Penrith, Cumberland.*

"We, the undersigned Members of the Medical Profession, residing in the Border Counties, desire to express to you our appreciation of the very valuable services you have rendered to scientific medicine during your forty years of practice, and to assure you of our hearty good wishes on your retirement.

"During your long and useful career various subjects of original inquiry have engaged your attention, and have led to important additions to our previous knowledge. Among those which seem to us to be especially worthy of mention are your Essay on the Pathology of the Urinary Secretion, which obtained for you a gold medal on your graduation; your discovery in 1844 of the presence of urea in the blood of patients suffering from typhus fever; and your subsequent investigations into the mode of origin and propagation of epidemic fevers. To your clinical sagacity and acute powers of observation is owing our present knowledge that epidemics of enteric fever and scarlatina may be caused by contamination of the milk supply, and this knowledge has already been of immense service in the prevention of disease.

"The high estimation in which you are held by your professional brethren was evidenced by your unanimous selection as the President-Elect of the Border Counties Branch of the British Medical Association upon its formation sixteen years ago, and the manner in which you fulfilled the duties of this office, the kindly interest you have taken in its welfare, and the number of able clinical papers which you have contributed to its proceedings, have tended largely to its success.

"In addition to your purely professional inquiries it may not be out of place to refer to your archæological researches. We are assured that your investigations have thrown light upon many important and previously unexplored subjects in your own district, and have obtained for you a foremost place among Northern Archæologists.

"After such achievements it has been thought fitting that your professional brethren should express their opinion of the value which they entertain of you and of your services, and of the eminent position which you have so long held among them. In doing so we wish you health and happiness to enjoy your well-merited retirement, and we have pleasure in appending our names to this address."

The President, in a most brilliant oration, full of learning, kindness, and good sense, presented the address to Dr Taylor, who replied as follows:—Dr Macdougall, medical brethren, and gentlemen, In rising to thank you for this manifestation of your goodwill, I feel I shall be utterly unable to testify to you my deep appreciation of the unexpected honour which you have conferred upon me. I accept this address, and I esteem it as the very highest compliment, as the very greatest honour which I could possibly receive, emanating, as it does, from a profession which I have ever loved, and from the kindly feeling of the members of this Society, and of practitioners with whom I have been more or less associated for many years. (Applause.) I am about to retire from the practice of our profession in the north of England, and that retirement will necessarily be tinged with some degree of sadness to me, and amid some of the regrets which I shall doubtless feel, not the least important will be that of a severance of association with the members of the Border Counties Medical Society, in which, from its first formation, I have always had the deepest interest. (Applause.) Gentlemen, the time comes to all of us, if we live as long, when the fatigues, the cares, the responsibilities of practice, particularly if it be an active country practice, induce in us a desire for more ease and leisure. We become, as the poet says,

"Hacknied with business, wearied at that oar
Which thousands, once fast chained to, quit no more."

And in excusing to myself that wish for retirement, my only plea is the plea of long servitude. (Hear, hear.) It is now thirty-nine years since I joined the ranks of the profession, and have been almost from the beginning engaged in laborious work, so that I have considerably more than fulfilled the share allowed by Moses to the Levites, as the working period of a man's life. (Hear, hear, and laughter.) You have been good enough in this address to refer to my contributions to medical science. In this respect my regrets are infinitely greater as to material lost and work left undone than any consideration of merit as to what I have done. You have referred to some observations on the history and etiology of fevers, and more particularly to observations on the propagation of fevers by means of milk. These to me present an old and curious story, reaching back to the year 1858, when these observations were first begun. After a time it seemed to me that the discovery of these facts fell dead and flat, and became well-nigh forgotten, for it failed in receiving corroboration from others, and I myself began to think there might have been some error in my facts or in the logic of my reasoning. But years rolled on, and twelve or thirteen years after I had the satisfaction myself of verifying the circumstance for the second time. (Hear, hear.) Soon after fresh proofs came from many quarters, and it was the source of the greatest gratification to me to find my old problem corroborated by other observers, and that which had been regarded as a dubious occurrence came to be recognised as a positive and general law of infection in sanitary science. (Hear, hear.) Sir, you have thought it worth while to refer to my researches in archæology. On this point I would only say to those who are working very hard at their profession, do not give a slavish adherence to it entirely, to the exclusion of all else. (Hear, hear.) Seek some change. some recreation, something to divert the mind or engage the body, as diverse as possible from the routine work. Adopt a hobby. (Hear, hear.) Amongst those I have taken to has been archæology. At all events, adopt something in which you have an interest—some literary pursuit, some branch of natural history, the collection of objects of natural history, or of objects in which you are interested; or, on the other hand, as a relief to sedentary and mental work, some out-door amusement, farming, hunting, fishing, or shooting. In this way you will secure the greatest present advantage to your powers, and may educate yourselves better for the enjoyment of leisure when it comes, and may be providing yourselves with solaces for advancing years. (Hear, hear.) Gentlemen, there is more I feel I should like to have said in responding to the beautiful address we have just heard, but I feel I can only again express my heartfelt thanks to your president, and to the members present, and to those who are absent, who have so kindly, and in such numbers, signed this beautiful testimonial, and I leave you with every good wish to the Border Counties British Medical Association. (Applause.)

Other toasts and some music followed.

CORRESPONDENCE.

To the Editor of the Edinburgh Medical Journal.

DEAR SIR,—Will you kindly allow me to make a few remarks in friendly criticism on the original article in last month's Journal regarding the prevention of the spread of scarlatina.

While admitting the general excellence of the author's paper, I should not like some of the statements which Dr Jamieson makes, in a somewhat dogmatic manner, to go forth unchallenged to the public as well as the profession.

Dr Jamieson, in talking of the scarlatinal poison, says that we do not know what it is. This fact in itself is sufficient to show how extremely cautious we should be in giving an opinion as to the best mode of neutralizing the effects of a poison about which we know so very little. I am afraid that the profession must admit we are, on the whole, very much in the dark as to the mode of origin and diffusion of exanthematic poisons.

"The first symptoms," Dr Jamieson says, "are manifested in the throat, the second in the eruption."

This statement I cannot admit the correctness of. During the present epidemic, having had a large number of cases under my care, both in practice and in the hospital, and, having most carefully observed the condition of the throat in all of them, I found a small proportion of cases, in which the disease exhibited the usual well-marked characteristics, *no sore throat at all,* not even amounting to the slightest catarrhal redness. In the majority of cases, we know, there is sore throat in varying degrees of severity, and I have found invariably that the appearance of throat affection is contemporaneous with the eruption, and, in a few cases, succeeds it by from twelve to twenty-four hours, or even longer.

As to disinfection, Dr Jamieson expresses very decided opinions, and is apparently prepared to draw a definite line at the period when infection ceases, provided the measures he recommends have been faithfully carried out. Now, Sir, in my opinion, this is a dangerous position to take up, and one in regard to which, I hardly think, the profession will be at one with Dr Jamieson. He altogether discards the idea of disinfecting the "surrounding air," limiting his treatment chiefly to the disinfection of the patient, including his excreta and fomites. I believe that careful attention to ventilation, and the use of such substances as permanganate of potass in solution, chloride of lime, and careful fumigation with sulphur, are most useful in rendering the air of the room innocuous.

In regard to desquamation, Dr Jamieson says it "usually shows itself during the third week, and may be ended by the sixth." My observations have taught me that desquamation commences with the retrocession of the eruption, often therefore at the end of the first week. In many cases it is later, but these are usually exceptional, and frequently of a mild nature.

For purposes of disinfection, it is recommended that boro-glyceride in glycerine be applied to the throat and nostrils. It must be very difficult to apply such a solution to the nostrils, except to the anterior nares, and this, I presume, is to be done with a brush. In malignant cases, whether diphtheritic or otherwise, the morbid condition of the pharyngeal mucous membrane spreads from the fauces into the posterior nares, and gradually comes forward to the anterior nasal openings, the most, indeed the only, thoroughly satisfactory method of treating which is by irrigation with the continuous nasal douche, thus washing out thoroughly each meatus. Boro-glyceride would hardly be suitable, on account of its consistence, for this purpose, unless well diluted with water. I much prefer either dilute lactic acid or permanganate of potass for this reason.

In dealing with the skin, a carbolised ointment with thymol is recommended, along with frequent bathing, and the following hazardous statement is made:—"When the treatment indicated has been faithfully carried out, the desquamating flakes possess no infectious property, and . . . . I believe it is quite unnecessary to wait for the end of desquamation before allowing the patient to mix with others." The soundness of this view I most emphatically challenge. Dr Jamieson considers his conclusion proved by a case which he brings forward, in which one member of a family suffered from scarlatina, and four other children, although mixing freely with the patient, did not contract the disease. Surely Dr Jamieson has met with similar cases in former years, when there was not such a dread of infection as there is now, in which the disease did not spread, although no special means were used to prevent it. I can remember many such cases, and other professional brethren with whom I have spoken have had similar experience. About four months ago I attended the child of a clerk in this city. The family resided in a flat. There were three other children who had never had scarlatina. The servant, taking alarm, went off, leaving the mother with her four children, one lying ill with the disease. Being unable to get another servant, she was obliged to do all the household duties as well as attend the patient herself. It was quite impossible to keep the children apart. Once or twice, when I called, one or two of them would actually be on the bed playing with the little boy. No special precautions were used, except attention to cleanliness and good ventilation. None of the other children took the disease.

As to the employment of unguents during desquamation, I believe they lessen the risk to other people by preventing the scattering about the bedclothes and room of epithelial particles. I do not consider, however, that the patient is correspondingly benefited by the practice. I think, instead of helping to restore the functions of the skin, the use of unctuous substances rather retards it; and I have had the feeling, rightly or wrongly, that patients are more liable to nephritic attacks when the skin is so treated. I have long given up oiling my patients. The practice is seldom now resorted to in the Sick Children's Hospital, or, I am told, in the Royal Infirmary. In both these hospitals no patient is allowed to leave until desquamation is over, in the belief that so long as any waste product of the disease remains, you have infection. It will certainly require much stronger proof than Dr Jamieson has brought forward to make me, and I believe the profession generally, believe that infection is at an end, whatever means have been used, until desquamation is over.—I am, faithfully yours, JAS. CARMICHAEL.

OBITUARY.

ALEXANDER WOOD, M.D., F.R.C.P.E.

NAT. DEC. 10, 1817; MORT. FEB. 26, 1884.

BORN in Edinburgh of a medical family—graduating early, with great natural talents, industry, and self-reliance—Dr Alexander Wood was for many years of his youth and manhood one of the most representative characters in the profession; and his career opened with such brilliancy that none of the prizes of the profession seemed beyond his grasp. Full of zeal, he was early not only a busy dispensary physician and ingenious inventor, but also an eloquent and successful extra-mural lecturer. In 1855, after ten years' experience as a teacher, he became a candidate for the chair of Practice of Physic in the University, and after a very hard struggle was defeated by Dr Laycock. After this Dr Wood's teaching career was practically over, but he threw himself with characteristic zeal into the arena of medical politics and college work.

For upwards of thirty years Dr Wood was very closely connected with the Royal College of Physicians of Edinburgh, and to him the College owes a deep debt of gratitude, for it is not too much to say that it is to Dr Wood's exertions that the College is chiefly indebted for its present high position as a licensing body.

Dr Wood was elected a Fellow of the College in November 1840, fifteen months from the date of his graduation as a Doctor of Medicine. From the first he took an active part in its affairs, and was elected a Member of Council in December 1846. In 1850, on the resignation of Dr George Paterson, he was elected Secretary, and held the office for a period of six years. In 1858 he was elected President of the College, and after the usual period of office (two years) had expired, he was, as a special mark of the gratitude of the College, re-elected for another year. In 1858 he was elected the first representative of the College in the General Medical Council, and continued to represent it till November 1873, when he retired from medical practice.

When the College of Physicians was founded in 1681, the privileges of the four Scottish Universities were specially protected; their graduates were entitled to practise medicine in Edinburgh without being liable to any fine, and the College was bound to confer its licence upon them on their simply producing their diplomas to the President. In fact, for a period of nearly 180 years the licence had been conferred upon none but university graduates. Attempts had been made in the College on more than one occasion to admit by examination licentiates who were not university graduates, but these attempts had failed, in consequence of the preponderance in the College of the professorial element. Certain changes, however, took place in the composition of the College. A large number of the teachers in the Extra-Academical School of Edinburgh became Fellows, and gradually two parties came to be opposed to one another, the professorial and what may be called the College party,—the former desiring to admit none but university graduates, the latter wishing to throw open the doors of the College to all duly educated candidates. The passing of the Medical Act of 1858, and the change which had been made in the position of the College, brought matters to a crisis, and in April 1859 the College agreed, by a majority of only one to admit to examination as candidates for its licence gentlemen who had no previous medical degree or qualification.

In the animated and often bitter discussions which preceded this change Dr Wood took a most active and prominent part. As an eloquent speaker and able debater he did his party invaluable service, and he contributed most materially to emancipating the College from the thraldom in which it had hitherto been held.

At the first meeting of the General Medical Council Dr Wood again did his College most valuable service. The College, when establishing its licence on the new footing, passed a regulation, that for a period of one year licentiates of any of the existing licensing boards, if of good standing, might be admitted licentiates of the College without examination. In passing this regulation the College expected that it would have been taken advantage of entirely or mainly by Scottish practitioners, many of whom were practising on a single qualification obtained from the Edinburgh College of Surgeons or the Glasgow Faculty. Instead of this, however, the majority of applicants were English practitioners, a large proportion of whom held the diplomas of the College of Surgeons and the Apothecaries Company. In consequence of the large numbers who availed themselves of the "year of grace," the College was subjected to much misrepresentation. It was said that it simply sold its licence, and that licentiates were admitted on the mere payment of a sum of money. This, however, was not the case. The antecedents of each candidate were carefully inquired into, and he was obliged to produce satisfactory testimony as to his social and professional position. The matter was brought before the General Medical Council by Sir Dominic Corrigan, who, on the 8th August 1859, moved, that with the exception of *ad eundem* degrees, no degrees or licences obtained since the passing of the Medical Act without regular examination should be placed on the register. Had this motion been carried the College would have been in a most awkward position, as all the newly admitted licentiates would have been refused registration. Dr Wood, however, was equal to the occasion, and succeeded in persuading the Council to agree to an amendment, that for the future no degree or licence should be given without examination.

Dr Wood performed other valuable services, having been mainly instrumental in having the heavy stamp-duty on the diplomas of licentiates removed, and in obtaining the recognition of the Double Qualification by the Naval and Military Authorities, and by the English Poor Law Board.

For his important services the College was duly grateful to Dr Wood, and acknowledged them in a variety of ways. On several occasions the special thanks of the College were voted to him, and on the 1st of February 1860, a committee was appointed "to consider in what manner the College should mark its sense of the services rendered to it by the President." The committee reported to the next quarterly meeting, and recommended that the College should present him with his portrait by an artist of high eminence, the choice of the artist being left to Dr Wood. The portrait, painted by Sir John Watson Gordon, President of the Royal Scottish Academy, was presented to Dr Wood early in the following year.

When Dr Wood retired from medical practice in 1873, he had his name removed from the roll of attendance, but it was at his desire replaced in May of last year, and he was subsequently present at two meetings of the College.

Dr Wood's chief contribution to the practical part of the profession was a most important one, and in those days would have made in itself name and fame, we mean the introduction into practice, indeed the invention, of the hypodermic needle, which has now become such a familiar agent in therapeutics. This he described in 1855. His literary work was fairly extensive. On "Leucorrhœa" in 1844; on "Mesmerism" in 1851; on "Spasmodic Diseases," 1853; on "Laryngitis," 1854; "Erysipelas and Scarlet Fever," 1855; on "Smallpox" in 1860. "Rational Medicine," "Homœopathy Unmasked," "A History of the College of Physicians," were larger works at different dates. He published also a scholarly lecture on "Preliminary Medical Education," and in 1868 he wrote an appeal to the inhabitants of Edinburgh on the subject of "The Houses and Condition of the Poor," which excited great attention. He for many years was a most diligent chairman of the Association for the Improvement of the Condition of the Poor, and in that capacity exhibited very great powers of organization.

Dr Wood was a most eloquent and effective public speaker, full of fire and generosity; and while he was a hard hitter and could speak his mind freely, he never showed any lasting illtemper, nor could understand if an adversary felt soreness, or remembered sarcasms.

In his later years, while feeling less able for the harassing duties of medical practice, Dr Wood found vent for his energy in many ways. A keen politician, an enthusiastic Free Churchman, a tramway director and manager, a shrewd philanthropist, his life was a well-filled and busy one, and his fine head, great voice, and burly figure will be much missed in Edinburgh.

PROFESSOR EMERITUS ALLEN THOMSON died at the age of 75, in London, on March 22, 1884.

DR CHARLES WILSON, a learned physician and contributor to our pages, died at Edinburgh, in his eightieth year, on March 19, 1884.

Brief notices of both these eminent men will appear in our next.

Part First.

ORIGINAL COMMUNICATIONS.

I.—REMINISCENES OF THE MEDICAL PROFESSION IN EDINBURGH FIFTY YEARS AGO: BEING THE HARVEIAN ORATION, DELIVERED AT THE ANNUAL MEETING OF THE HARVEIAN SOCIETY, 14TH APRIL 1884.

By the President, ALEXANDER KEILLER, M.D., F.R.C.P.E.

THE subject, or rather subjects, which we have been induced to select as material for remark on the present occasion will, we doubt not, satisfy those present, especially on one point, viz., that if what the writer is now to say be at all fairly grounded on individual memories and on personal retrospection, he must necessarily be the very reverse of a chicken; seeing that we are to go back, in thought at least, to self-witnessed men and manners long since dead and changed, the theme we have chosen being the Medical and Surgical Profession in Edinburgh Half a Century ago, which may have unchickened our years, but has not as yet blotted out our remembrance of individuals and occurrences about whom and concerning which some degree of interest may here be still felt. The materials we have had to work upon have been the reverse of scanty, indeed rather redundantly voluminous, and create the difficulty often experienced in making a proper selection, and in satisfactorily stating what must for want of time be briefly discussed.

We shall endeavour in our back lookings to give jottings from the beginning of our earliest remembrance as to what we then saw, and knew, and thought, of our predecessors who, about that time, occupied the front ranks and the then most prominent positions in the medical, surgical, and allied professions of this city.

It is the individual characteristics of the men more than their professional achievements we shall here attempt to sketch, for while we may manage to take a rapid glance back at them individually, especially as we occasionally saw them while in the discharge of their ordinary duties, it would prove a difficult and tedious effort to attempt any minute reference either to their general professional stewardship, or special indebtedness due them by their immediate contemporaries or subsequent followers.

In attempting to give a retrospect of fifty years in less than fifty minutes, the incidents, such as they were, will necessarily require to be so summarily dealt with, that we can see no other way of getting over the ground we have chosen for this occasion than by setting about it in what may be called a sketchy, hop-skip-and-jump style.

'Conciseness, and the keeping in mind the words in our text, "Personal Memories," must be our chief effort, which we fear may too obviously have this uncomfortable although unavoidable appearance of egotism.

We could not, and certainly would not have chosen our present subject apart from its *personal* consideration, and therefore in treating it we must risk the imputation of egotistical intent, for had we not personally observed, and been more or less personally acquainted with the matter we are now to speak of, we would not have thought of troubling this Society with any reminiscences or lucubrations of ours on the subject.

Among our student recollections, there are a few which may here be briefly referred to, especially as they take us back not only to our earlier beginnings (not to speak of our well-remembered difficulties and never-to-be-remembered shortcomings), but also carry us back to long past scenes and associations connected with the Edinburgh Medical School and Edinburgh medical students of our own student days, the memories of which are even yet wonderfully fresh to us. It may not be altogether uninteresting to hear from an old, and, until recently, the oldest, extra-mural teacher, something of the Edinburgh Medical School as it existed more than half a century ago.

To begin at this, our beginning, or rather before it, we may at once mention an incident which doubtless had the crowning effect of specially inciting our juvenile idea to determine to try our best to study the grand profession and high art of medicine, which, notwithstanding the well-remembered prayers of our home friends, who were then good enough to think so well of us as to prophesy that we were destined for the ministry, although somehow or other we managed to escape from such a grave responsibility, and to rather prefer fighting our way in the direction of looking after the bodies, including the minds, of both men and women; in the hope of studying to do so with sufficient earnestness and success, and which we commenced to do, not by giving up our usual attendance at church, but by superadding an unusual attendance in churchyards, and which we were early observed to take to, but certainly not with the then supposed object of meditating among the tombs, but with the unsuspected and nefarious purpose of prigging human bones!

Adam Square and its associations have still to us odd memories of our earliest beginnings. The houses in it were few in number, and, being at one time capacious, self-contained, and near the University, were inhabited by professors and other well-known lecturers, among whom was Dr Andrew Duncan, Professor of Materia Medica, who lived up to the period of his death in one of the centre houses, which afterwards became the School of Arts.

Dr Duncan was distinguished in many ways, and especially for his kindness to students and young members of the profession. He for many years was marked for his early rising on one particular day, that of the first of May, when it was a common custom for thousands to ascend Arthur Seat to enjoy the fresh air and early dew of "May morning," which was then supposed to possess a long-life virtue to those who never failed to keep up the annual visit, and especially to those who never neglected to moisten their faces with the salutary influence of the "May morning dew," and which the worthy professor was thought to successfully do, seeing that he did so up to his 83rd year.

But it is of Dr Duncan's next door neighbour's house we are now more particularly thinking, as it was there we lived throughout our student years, and in it and from it had occasion to see and note much of the material which we are about to attempt to describe. The house we refer to was the property of Dr Fyffe, teacher of anatomy, well known from his numerous illustrative works and anatomical plates. It was here that our fancy for anatomy was first stirred, although in a hidden, if not stolen way. We, somehow or other, with as much honesty of purpose as we then possessed, discovered a garret room at the top of the said house, and which, through curiosity and perseverance, we managed to get an entrance into, when we found an *omnium gatherum* of almost everything relating to the production of anatomical plates, of which Fyffe was known to be an almost unequalled generator. The contents of this garret indicated as if the life efforts of Fyffe in the special direction of illustrating anatomy had been bundled into it by the hundredweight, in the form of all sorts and sizes of copper plates, with original and copied impressions by the thousand. We certainly made the most of our stolen opportunities, and, winter as it was, almost lived in that never-to-be-forgotten attic, until we managed to read if not to master every depicted point of the body.

The desire for stolen goods in the shape of human bones grew upon us, and fortunately we found out a long-hidden treasure connected with the old library of the University, the materials of which had even up to this period not been removed out of the University quadrangle, which, 'tis said, was the original position of the central church, or "Kirk o' Field." We remember of the clearing out of this old edifice, and of intently watching the cartage of its under soil to assist in filling up, so as to make the new "earthen mound." We twigged that there were even large human bones among this University rubbish, and for which we took such a fancy, as not only to note their position and kind, as they were being hurled down the mound embankment, now forming the west end of east Princes Street gardens, but to go back even at midnight and grope about for them, so as to carry them off to our rooms in Adam Square, at the risk of being collared if not garrotted under unusually suspicious circumstances, viz., that of having parts of human skeletons concealed under our cloak during midnight, when even few policemen were afoot; when we state that one moonlight night, or rather morning, we had the coolness or rather hardihood to unbury from out of the loose rubbish lying at the foot of this University "toom" a large and fine shaped skull and an unusually long femur, both of which valued student trophies are still in our possession,—when we mention this, along with the fact of our managing to get safely home with our strange burthen, we dare say that the opinion we have since entertained frequently as to this transaction will be endorsed by others, to the effect, at least, that we must have been even then well enough cut out for any business (all others failing) akin to that of "a body-snatcher," or other equally honourable calling. The foregoing bone-boning incident connected with the "Kirk o' Field" not having been mentioned in the recently published "Story of the University," has induced us thus to record it, especially as the skull referred to may possibly yet turn out even to be the veritable cranium of some principal actor in our University's history.

The comparatively scanty supply of subjects for dissection, and the expense, not to speak of the danger and difficulty associated with remedying this, led to constantly-recurring strange doings, suspicions, and disturbances, of which we nowadays neither hear nor see anything.

The stories and ongoings in Edinburgh during the time when "resurrectionists" plied their profitable vocation throughout various parts of England, Ireland, and Scotland, were of the most exciting and dreaded character. The so-called violation of graves, and horrible deeds of "doctors" as to bodies or "subjects," or rather *sujets* (which in the reign of terror times of "*Burke* and *Hare*" was construed into, and well known even to the street children as "*shusey*"), one or more of which their frightened and heated imagination fancied formed the contents of every box, or even tea or other chest, carried, especially after dark, within suspicious distance of the University, or other medical schools in the neighbourhood. Many a poor devil of a street porter, or other unfortunate carrier of trunks and boxes have we seen suspiciously mobbed and almost half murdered. We then lived in Adam Square, close to the University, and had only to look out of our study window, which overheard as well as overlooked the main entrance to the suspected University, and still more suspiciously-dreaded Infirmary Street, at the bottom of which Burke, Hare, and Co. were supposed to deposit their too recently alive, though now most unjustifiably dead. The usual cry of "A shusey! a shusey!" was enough at once to collect a mob of men, women, and children, the last of the almost nightly crowd (the young ones), taking very good care to have their faces well covered, in case the "doctors," who were always supposed to be in league with the "Burkers," would put plasters on their mouths, and so manage to dispose of their young and fresh bodies to Dr Knox, who had to stand the brunt of the notorious Burke and Hare epoch. We knew a good deal of the beginning, progress, and end of that epoch, for we were a very early pupil of Knox, and knew, as an old penny-a-week pensioner, "Daft Jamie," who, from his sudden disappearance and club-foot discovered in Knox's dissecting room, first brought the Burke and Hare business to light, and not only led to the conflagration of public indignation and judicial investigation, followed by condign punishment of the murderer Burke, but to the burning of Knox's effigy, to which, among other intended dishonours and hair-breadth bodily escapes, the supposed guilty, famous anatomist was cruelly subjected. We knew and saw a good deal of all this, for we not only followed the enormous crowd who carried the spectacled figure of Dr Knox through the public streets, and saw his effigy hung up by the neck and burned on a tree in front of his then house in No. 3 Arniston Place, Newington, but witnessed the end of Burke on the scaffold on the morning of the execution; and not only so, but afterwards saw his body, which was publicly exhibited to crowds for two days on the anatomy lecture-room table in the University, where we remember a masculine-minded countrywoman who was among them nearly crushed to death for her, in this case, unbecoming exhibition of womanly curiosity. We happened to be immediately in front of this poor woman's unusually prominent belly, and were surprised that the cause of its prominence did not suddenly yield to the pressure to which it was there and then so unavoidably exposed!

The hanging of Burke amidst the execration of so many thousands, and the subsequent exhibition of his bloated body, were scenes certainly not to be readily forgotten, but the purchasing of purses manufactured out of his tanned skin, especially by ladies, would seem to show how difficult it is, even for a monster of the deepest dye, to escape at least *mortal*, we dare not say immortal, fame!

At this time Knox was unquestionably in many respects the most notable, if not also the ablest, lecturer in the Edinburgh Medical School, a man, as his biographer Lonsdale truly said, so scholarly and many-sided, so original and versatile in thought, so broad and comprehensive in views, as not to be easily portrayed. Knox died in 1862 in the very reverse of comfortable circumstances, but yet kept up to the very last his equanimity, when "his wants were few and easily supplied, now when the love of applause and the fiery ambition in his life's fretful aim had quite passed away." He had spoken of "writing his life," and gave as a reason that he could explain the terrible events of 1828 better than any other person living, and, further, that he would be able to prove his entire innocence of all and everything pertaining to the West Port atrocities;" but this he did not live to accomplish, for, as his biographer tells us that, after attending to his duties at the Cancer Hospital on the 9th December, he came home tired and exhausted, that after a glass or two of champagne he seemed refreshed, and went to bed. In a short time the noise of laboured breathing was heard proceeding from his room; he was found apoplectic, and with little or no rallying of the powers of consciousness he continued till his death on the 20th December, 1862. His funeral took place on the 29th in Woking Cemetery, and was strictly private. Sir William Ferguson afterwards erected a suitable memorial over the grave of his renowned, though unfortunate, teacher and friend, "to whom he owed so much."

Shortly after his death, one of his most distinguished pupils, *John Goodsir,* yearned to see some historical record written that might prove worthy of his great master, and thus addressed a fellow-pupil, and at one time a teaching partner of Knox's, "Well, Lonsdale, his biography should be done by one or both of us, you knew his character and thoughts better than any one. I'll gather his science, and show the import of his teachings." Goodsir, however, greatly to the loss of the science which he himself so much adorned, followed his old master to the grave in 1867, leaving Dr Lonsdale not only to do biographical justice to their mutual preceptor, but subsequently to that of Goodsir himself. "In sketching the history of my friend and companion Goodsir," says Lonsdale, "Knox's presence oft came visibly before me, and with it arose the wish to do justice to his character and memory," and which he certainly did not fail to do.

The West Port atrocities (which consisted in the cold-blooded and systematic suffocation of thirteen waylaid and stupefied victims by the two monsters Burke and Hare or rather Hare and Burke, for of the two Hare, who cowardly saved his own wretched life by turning king's evidence against Burke, was the worst) not only led for some time to a widely spread reign of social terror, especially when it came out that the cause of the murder of their made unconsciously drunk victims was the tempting price (£10 or £15) which was got for each dead body, to supply the largely attended dissecting-room in Surgeon Square belonging to Dr Knox, the very mention of whose name became a public dread, and whose person had then many a narrow escape from the violent if not murderous outrage of popular detestation; and perhaps no wonder, if there was supposed to be anything like truth either in the current speeches or in the words of the songs composed on the Burking affair, such as—

"Down the close and up the stair,
But and ben wi' Burke and Hare,
Burke's the butcher, Hare's the thief,
Knox the man who buys the beef."

But having said so much on the indignation side of this awful, never-to-be-forgotten public scandal, which not only endangered the furious tearing to pieces of "the greatest anatomical lecturer ever heard in Britain, the man of rare intellect, commanding eloquence and genius," it is only fair for us to put in a word, if we can, for the dead, whom we knew as a teacher, and attended his crowded lectures upwards of fifty years ago, when he was in the very height of his prosperity, it is but an act of simple justice to say here that there was no satisfactory evidence to prove that he knew anything as to the criminal nature or infernal character of his anatomical supplies, and although it was afterwards said, and too often since hinted, that he ought to have known, or at least suspected, the perpetration of foul play from the number, comparative freshness, etc., of the bodies when placed on the dissection table, in answer to this suspicious aspect of Knox's conduct, we ask why should he have known or suspected it when such of his right hand assistants as Ferguson, Rhymer Jones, and others, never did? From much experience of dissecting-room employment, and from what we have seen and known of the difficulty of establishing, not only the identity of dead nude bodies as they are generally seen exposed on dissection tables, and from what we happen to know of the old and then required resurrection system, and of the Burking transaction, so far as Knox and his assistants were concerned, we have always thought, and still think, Knox to have been most uncharitably dealt with throughout, and after the Burke excitement, which, as some of his friends used to say, went far to account for the satirical bitterness and unapproachably clever irony in which he was afterwards known to indulge towards his teaching and other rivals.

Our memory of the operating theatres and operative work in the Infirmary take us back to a point in the history of public surgery in Edinburgh farther, as we may safely venture to say, than many, if indeed any now present can remember much about, for we can speak of the time when the operations were performed not even in the oldest part of the old medical hospital, which was constructed out of the old High School at the foot of old Infirmary Street, but in a very different and less pretentious place in the oldest block of the old part of the now vacated medical hospital, still standing in Infirmary Street.

In the upper part of the central, or clock tower portion of the old medical house, was the then simple area in which the then surgical lions exercised their special calling. In this smallest of operating theatres, which was of the humblest and quaintest architecture, we first saw the great Liston's great hand in grand style handle his knife before audiences which the great surgeons of the present day, who so ably display their great performance in great theatres, before great numbers, would rather not be compelled to face.

We happen to be one of those who are ancient enough to remember not only what practical surgery used to be like more than half-a-century ago, but having, long before the comparative comfort and comparative ease of painlessly operating on anæsthetised patients, not only done no small amount of so-called major surgery, and having witnessed and practised anæsthesia from its very beginning and in all its forms, we ought to be able to tell something at least from our personal memories, if not from our personal experiences, as to the best known surgeons of this city, now pretty long ago, when, with studious observation, if not duteous admiration, we from our then humble standpoint well remember closely following and keenly noting their then supposed wonderful deeds, especially in the operating theatre, the front seat of which we somehow or other generally managed to get into, and can even now imagine that we can vividly see not a few of the still well-remembered though now old scenes therein enacted, especially on the "field days," as we used to call them, and which (such was the studied moral laxity of the surgeons in those unregenerate days) were purposely held on the Sundays, when the more seriously disposed, or at all events more church-going disposed, students were to be seen rushing in hundreds to the old Infirmary gate, across Infirmary Street, from out of the gallery purposely set apart for them in Lady Yester's church immediately opposite. The minister in those days was perhaps the most popular preacher in the city, and taking, as he always did, a deep interest in the students' professional well-being, he used to stop his discourse and sit down whenever he heard the Infirmary bell ring, so as to allow the inevitable emptying of "the students' gallery" to take place, the unceremonious noise of which, had he continued, would have drowned his voice and rendered his eloquent tongue akin to being speechless, so far, at least, as his congregation was concerned. The rush from the gallery of that church to the pit of the surgical theatre, in order to get a comfortable front seat so as to narrowly see the whole performance, was anything but calculated to increase the earnestness of our devotional exercises or more deeply impress us with the Gospel truths we had just listened to.

Liston and Lizars then gave a conjoint course on clinical, or rather operative, surgery. We attended their prelections, and need scarcely say they were of the most practical and friendly character, for they always vied with each other in the most friendly spirit, both being splendid as well as fearless operators, each doing his best without any evidence whatever of trying to cut out or cut down the other, which, of course, no surgeon nowadays ever thinks of doing, or has any right to do. We have not time to attempt to describe what appeared to us to be the distinctive attributes of our two masters. They were both great surgeons, but yet were very different in action, as they were in appearance. Although Liston was comparatively great, Lizars was by no means small, either in appearance or in operative style, and as for plucky fearlessness, as well as manipulative dexterity, it would be difficult to determine to which the palm ought to be given. Of the two, however, nature had most favoured the former, and which the latter did not even attempt to cope with, seeing that it was of little use, but always took care to set about his work in what he believed to be the most workman-like fashion, and which was at times exceedingly peculiar, if not verging on the ludicrous, especially when he appeared in his operating anti-hæmorrhage costume, which consisted of a pair of very loose overalls, an old long-sleeved topcoat, buttoned up even beyond the throat, and the better to prevent any possible spurting of blood reaching his shirt collar or necktie, which was never of the white choker stamp, his odd-looking and somewhat hangman-like toilet, at which we frequently assisted, usually came in for at least a share of the warm reception he usually got when thus appearing in the surgical theatre to perform his tragic part in defiance of blood, which, however, when it got, which it sometimes did, over the uncovered part of his face, gave him anything but an unbutcherly aspect.

The specially bold surgery of our old and esteemed master, Lizars, is no longer scornfully denounced as unjustifiable, but, on the contrary, is now generally applauded, and surgically confessed as worthy of being surgically professed, seeing that our best and most advanced surgeons rather desire to outstride than to deride so-called "ovariotomists," whose judiciously and practically proved precepts and example have done so much to promote the advancement and secure the success of Peritoneal Surgery. Although all may well encourage and applaud the successful efforts of our ovariotomists and modern gastrotomists, of whom we have good reason to be proud, there is a debt of gratitude which ought to be duly remembered and faithfully discharged in behalf of those who succeeded in, as it were, paving the way under difficulties which are to us now unknown, and therefore unfelt.

We are old enough to remember seeing Lizars open, in the dissecting-room of the Brown Square School, a large multilocular ovarian cyst, which he had removed on the previous day, and we were one of the few then present who heard him bitterly complain of the abuse which had at that time been heaped upon him for daring to justify his attempts to extirpate and cure ovarian tumours by abdominal section,—an operation, however, which he even then warmly urged, not only as a justifiable procedure, but prophesied that, through time, it would be found a means of saving many a life; and need we say that, notwithstanding the short-sighted folly of those who even denounced him as a murderer, and stigmatised his name as that of "Ovary John," he well knew what he was about before the "ovarian spectacles" of Spencer Wells were framed, or our esteemed friend Thomas Keith was born; for assuredly the great honour of being the first to carry the idea of ovariotomy into practice belongs to the enthusiastic, skilful, and daring operator, *John Lizars.*

Liston had a splendid general physique, and a fist which we have often seen exercised in the performance, and that in a style almost peculiar to himself, of the grandest as well as the minutest operation supposed to be then possible in surgery.

To witness the manipulative power and dexterity of the enormous fingers of such an enormous hand of such a, comparatively speaking, enormous man, whose barrel bulk, even in mere head and shoulders, was generally enough to prove a too solid, and therefore untransparent, wall of partition between more than one-half of the unfortunately situated, because too one-sided onlookers, and the then too wide awake, and therefore usually yelling surgical victim, whose sufferings, however, the unquestionably great Liston generally managed to make as brief as possible.

Did time permit, we could here readily enough introduce from personal remembrance, not only illustrative instances of his surgical achievements and operative peculiarities, but of some of his individual and characteristic traits of conduct during our student days, and subsequently, of which we enjoyed ample opportunities of observing and of becoming familiar, from the fact of our having been one of his few hospital pupils privileged, on repeated occasions, to witness his home or more private cases. The system of practice, especially in regard to home patients and home pupils, was quite different in those days from the present time.

We cannot but refer to one or two cases and incidents which, while directing our thoughts back to Liston, as we saw of him and knew of him, crop up, strangely enough, as if they had only recently occurred.

We have already referred to his powerful build, the mere appearance of which was more than enough to make even the biggest bruiser hesitate before encountering Liston fisticuff, in either the noble or ignoble art of self-defence; and in thinking of our present hero as an object of physical power, we shall here cite the particulars of a case which went to exhibit his force of skilfully applied will as well as muscular dexterity. A strong fellow of a carter was one day admitted into the old Infirmary in consequence of an overlooked dislocation of the shoulder-joint, which puzzled the surgeons on duty to reduce, especially as their repeated attempts at reduction were greatly frustrated by the too obviously determined resolution of the obstreperous and unusually resisting monster of strength, whose unmanageable muscularity Liston was afterwards induced to alone cope with and subdue, and which created a scene more akin to that of bull-baiting than to human surgery.

We were fortunate enough to witness this new trait of tact as well as of strength, and on the still unsubdued and as yet unrelieved animal being again led into the enclosed ring, he was immediately pounced upon by the herculean Liston, who at once firmly grasped the obviously fixed, because immovably dislocated extremity, and which he continued powerfully to pull and twist, and then to violently manipulate under a perfect storm of the most dreadful oaths and personal kicks, even against the region of parts by no means well or safely protected. Liston, however, was quite equal to the awkward situation, and as every kick with dangerous force was launched at him in front, he knew his anatomy too well not to swing round so as to receive them on amply cushioned parts behind, until his own time came to return the madman's blows and imprecations with confounding, and, at the same time, most successful interest; for, while engaged keeping up the extension required to overcome, if possible, the muscular contraction in order to facilitate the reduction aimed at, Liston knowingly and cleverly seized his opportunity, the most precious opportunity in such cases, of staggering the muscles into comparatively flaccid abeyance. Liston, while keeping up the extension with one of his big and powerful fists, and fiercely eyeing his still cursing and kicking surgical victim, loudly exclaimed, "You d——d scoundrel, what are you swearing at?" and with one momentarily-released right mighty hand struck him a bang between the eyes, when immediately, through Liston's masterly manœuvering, in popped the stubborn joint of the now bunged-up-eyed carter, who obviously failed to appreciate either the laughter or the applause of the audience.

Liston was staid and somewhat stern in his usual demeanour, and had little relish—which few have—to be laughed at, and of which dislike to afford a little amusement to others, even through accident, we remember a ludicrous illustration, which we have often spoken of as a case of "breech presentation." In one of his summer clinical lectures he was speaking of the tourniquet, and its best and most applicable forms, and then exhibited a specimen which he had newly invented, and the power of which he set about showing on his own person. The instrument was on the principle of an ordinary double-padded hernial truss, with an unusually strong spring, and which he managed by using considerable force to bend round his enormous thigh, so as to reach the region over the femoral artery, and, after showing both before and behind how well the two pads fitted, it caused him no small difficulty in again releasing himself from their firm pressure; and, when striving with considerable force to re-bend the powerful spring, the back pad got hold of the gluteal region of his thin, light-coloured, drawerless trousers, which so extensively gave way more than enough to show, and that in the most bare-hipped fashion, the enormous extent of his lower and posterior proportions, which unlooked-for exhibition could not, and did not fail to receive rounds of applause, as well as side-splitting laughter, to suppress which one student friend of ours almost suffocated himself, by so stuffing his handkerchief into his mouth and throat that even Liston himself seemed anxious as to his ultimate safety.

About this time there was an unusual scarcity of subjects for dissection and operative purposes, and as the surgical teachers had by agreement the preference of the use of bodies on which to exhibit their class operations, there was occasionally no small suspicion and discontent on the part of the surgeons, because of the almost utter lack of the provision of such necessary teaching material. Liston and A. J. Lizars of the Brown Square School, in whose dissecting-rooms we were then constantly engaged, had agreed about the first reported body, and which happened to be one said to have been sent all the way from Ireland; but its conveyance to Brown Square from the Canal at Port Hopetoun was unluckily intercepted in the Cowgate, by the resurrection porter carrying the big tea chest with its Irish contents becoming suspected and mobbed near his destination, as to lead not only to his being jostled, but detected, by his burthen being so forcibly dashed to the ground as to expose its horrible nature. It was taken possession of by the police, to whose protection the unfortunate carrier had to ascribe his escape from being then and there converted into a fresh "subject." Liston having in some way heard of "an arrival," sent word that he was coming along to Brown Square to arrange about his claim to its use, which unexpected message induced Lizars (who although anxiously looking out for the safe delivery of "the Irish chest of tea," was not as yet aware of its unfortunate miscarriage and consequent police seizure), if possible, to do him out of his claimed right even to a mass of Irish corruption; and to carry his point in this direction, he enlisted us into his graceless service of watching the approach of Liston, to tell him rather more than a "white lie," which ended in our being caught in the very act, and landed into richly deserved, although unusually elevated, disgrace; for while obeying the strict order of our preceptor, in waylaying and assuring Liston that "Mr Lizars had gone out, and was not likely to be soon back again," who but Lizars himself, in his ordinary dissecting-room costume, looked over the bannister, two flats above from where we were solemnly assuring Liston that "he was not within the premises," and bawled out, "Is he away?" at hearing which, and looking up to Lizars, we were immediately seized hold of by Liston and pitched over his broad shoulders as if we were weightless, and thus carrying us upstairs, while giving us a good shaking, and exclaiming, "You lying little devil" all the way, and ultimately landing us, with a finishing shake, on the middle of the dissecting-room floor, much to the amusement, not only of the students present, but of Lizars, who led us into the Liston grasp, and who was, at this time, not only unaware that he himself was done out of the police subject, but failed to escape the unexpected penalty of having to allow Liston to operate on the only body then in his rooms, and which well-remembered occasion gives a fitting finish to our narrative, seeing that it affords an opportunity of re-introducing our impressionable student friend, whose irrepressible fits of laughter at the tourniquet exhibition gave Liston the chance of paying him back in his own coin so far as laughter was concerned. Our friend had a dreadful squint, and was otherwise of the readily kenspeckle type, and, being one of Lizars's prosectors, was prepared to give his assistance in holding the limb to be amputated, and placing the subject (which was a resurrection one and green with age) in due position. Liston having asked Strabismus to hold back the flaps, he himself not caring to touch them, except with his amputating knife, the point of which accidentally wounded our friend, who now looked, as if terror-stricken, first at his bleeding finger and then imploringly at Liston, who, no doubt to abate his fears and give him courage, began to laugh so heartily (while exclaiming, "The more you bleed the better") as to give rise to the suspicion that he rather enjoyed than otherwise his "return" cachinnation. But this, of course, was merely a fancy on the part of him who had only a week before made a fool of himself by his too conspicuously prolonged spasmodic laugh at Liston in his own crowded theatre. Be that however as it may, it was pleasant to know that the great Liston afterwards exhibited not only a forgiving, but most kindly feeling towards us both, and which he particularly did on the occasion of our asking his acceptance of a cleverly drawn water-colour of one of his best operation cases, of which there is a beautiful wax model in the museum of our College of Surgeons. We allude to the enormous tumour of the upper jaw, which we saw Liston successfully remove.

About this time, when Liston and Lizars were so dexterously occupying the almost entire field on the surgical stage of the Infirmary, there arose a tremendous fire, kindled by a match from out of Minto House, the real extent, nature, and results of which burning would require a long time to tell about, for it involves the Clinical Chair story, when, to the disgust of Liston (and others who thought with him) Syme sought (it was said bought), at all events fought for, and that successfully, the professorship which he afterwards so honourably and so ably held.

We not only witnessed his first appearance in the Infirmary, but well remember what took place in the hospital camp immediately after he stormed and carried it under the wing of Russell, who lost nothing by the transaction, but the disaffection and indignation of Liston. It is, however, unnecessary to go into the so-called purchase transaction between the old clinical professor and the new, for it only amounted to the former being induced by the latter to create a vacancy by retiring from the chair for a certain consideration, in order that the latter might have a better chance than Liston, or, indeed, any one else who did not choose to pay £300 a year for securing Russell's retirement, influence, and chair, of which Syme was accused, and most heartily abused for thus *buying* Russell and *selling* Liston). The same sort of thing (we do not call it job) has often been done before, and will often be done again, so long, at least, as desired place and power can be reached by the aid of even "the root of all evil;" but which in this special case turned out to be a most wholesome plant.

In referring to this very exciting period of our surgical reminiscences, it would perhaps be wrong to rekindle angry flames which have long since died out; there were, however, so many ludicrous as well as burning incidents connected with clinical warfare and other discords about this time, that we may, with as much leniency and good humour as possible, here venture to say a word or two regarding them.

Our chief knivesmen were constantly at daggers drawn with neighbouring tribes of the Brown Square School on the west, and the Surgeons' Square School on the east, the centrally located chief and originator of the old Minto House, near old Argyle Square, being frequently in danger of even personal injury, and once indeed of being shot in a duel which was spoken of, but never came off, between him and a kinsman of the Clan Mackintosh, not to mention also a narrow escape from the indignity of a horse-whipping within the old Infirmary gate, even at the hands of a Ferguson! But we must not enter further into this stormy period of our surgical remembrance, for it would serve no good purpose to seek to uncover old surgery sores, or to attempt to settle old scores by referring to the special weaknesses of those who have gone for ever from amongst us, seeing it is rather our duty to tenderly deal with their memories, to "let bygones be bygones," especially with the failings of the principal actors, who have gone to sleep, and can no longer disturb the professional atmosphere they at one time did so much to illumine.

Although some useful lessons might perhaps be got out of examining the resulting cicatrices to see how they possibly might have been prevented, or at least rendered less unseemly, it may be as well to avoid more minute investigation into professional or professorial squabbles such as those we have hinted at, or those of the Syme-Simpsonian type, and others fortunately of gone-by times.

In speaking of or dealing with long past ongoings and conduct, we must be lenient, for were we to judge of the behaviour and character, professional or social, of medical men and manners in the time they lived, by applying anything like the same stringent rules as might and doubtless would be considered applicable enough to ourselves in these days of comparative progress and sober-mindedness, we would be too apt to be severely critical on those even who were then looked up to as worthily filling the highest posts of honour or ably occupying the foremost rank in the profession. To be just in our judgment of them or any one who have lived and died in years gone by, we are, in fairness to human frailty, bound to look at them and to speak and think of them from a standpoint in keeping with their day and generation, for had they lived and acted in more modern times and under different circumstances and surroundings, it cannot be doubted that their then views would have been to them now as foolish and even as false as they now are believed or known to be.

We therefore prefer remembering that bygones should be bygones, especially in dealing with the frailties of those who have gone from amongst us, leaving their memories, as all must do, to be as tenderly as possible reviewed by their successors in office, the occupancy of which is of very brief duration; and in time, which so rapidly flies away that even the longest liver usually finds it completely gone before he can manage to rid himself either of personally experienced defects, or of others' suspicion as to the impurity of his motives and uncleanness of his hands or tongue, out of which so many professional quarrels and battles have arisen and been fought in the past, even among otherwise great men, whose smallness, especially in the greatness of their pugnaciousness, and consequent absence of anything approaching to extraordinary brotherly-kindness, gives us all good reason to be thankful that we not only live in less turbulent times, or rather, to put it more pointedly, because more truthfully, that we, fortunately for ourselves, if not also for others, have outlived the fighters, and seen the folly of their fightings, and doubtless gathered wisdom, and no small measure of comparative peace, which brings happiness to those, at least, who desire to avoid discord, and to live as much as possible within the pale of professional harmony, and with brotherly-kindness and charity one towards another.

(To be continued.)

II.—FIVE CASES OF AMPUTATION AT THE HIP-JOINT.

By Roderick Maclaren, M.D., Senior Surgeon to the Cumberland Infirmary.

(Abstract of a paper read before the Medico-Chirurgical Society of Edinburgh, 5th March 1884.)

The cases were all treated in the Cumberland Infirmary.

Case I.—N. R., male, æt. 10, admitted 2nd April 1880. Had acute necrosis of the femur of three weeks' duration. Amputation seven weeks after admission, the delay due to parents refusing consent. Temporary improvement for a week; then pelvic abscess, necrosis of ilium, and death from exhaustion twenty-six days after the operation.

Case II.—A. P., male, æt. 17, admitted 24th September 1879. Had necrosis of the lower third of the femur of eight months' duration. Sequestrum removed. This followed by progressive suppurative periostitis, frequent attacks of pyrexia, and general exhaustion. Amputation eight months after admission. Good recovery. Is now well and vigorous.

Case III.—J. L., male, æt. 20, admitted 9th June 1880.—Hip-joint disease of six years' standing. Much suppuration, consequently extreme weakness. Amputation five days after admission. Slow recovery. Subsequent removal of tuberosity and ramus of ischium and much bone from the neighbourhood of the acetabulum. Now well, and works regularly at his trade as a watchmaker.

Case IV.—T. B., male, æt. 6, admitted 21st June 1882. Acute necrosis of femur of four months' duration. Much discharge of pus; boy very thin. Amputation five days after admission. Rapid recovery; stump healed in five weeks. Some bone reformed in stump. Is now in vigorous health.

Case V.—M. A. S., female, æt. 12, admitted 20th June 1883. Hip-joint disease of more than three years' standing. Excision of hip-joint May 1880. This followed by increase of local bone disease, fresh abscesses, and general deterioration of health. Patient sent to Home for Incurables; condition believed to be hopeless. When there, enlargement of liver and albuminuria; subsequent disappearance of these conditions. Readmitted to infirmary in an exceedingly feeble and emaciated condition, with the hip discharging largely. Amputation 10th July 1883. Slow but steady progress to recovery. Still unhealed sinuses.

The method of operation in all these cases was that of Mr Furneaux Jordan, which Dr Maclaren performs by making a circular incision or double flaps somewhat above the middle of the thigh, then an incision along the outer side of the femur, ending above the trochanter, which allows the disarticulation of the head of the bone, the important point being the low division of the soft parts. For controlling hæmorrhage he prefers Davy's lever to any other method. But, as it is sometimes difficult to place the lever on the proper spot, and as it would in some cases be dangerous, on account of emaciation, compression by a rubber bandage was also spoken of as a convenient and effective way to stop the circulation. In the above cases, after removal of the limb, the principal vessels were tied, the lower edges of the wound sutured, and then the cavity stuffed with sponges wrung out of carbolic lotion, and wrapped in gauze; this saved the delay which would have occurred if every little bleeding point had been tied. The sponges were generally removed the day after the operation. Case II. was operated on under spray, and dressed with gauze dressings. The others were dressed in the simplest possible manner, mostly laid on a pad of oakum and covered with a layer of lint soaked in carbolic oil. In the last two cases the cavities were packed with carbolized lint into the acetabulum. Movement was avoided as much as possible, and the wounds frequently washed and syringed with carbolic lotion. The resulting stumps were all good and comfortable.

The low method of amputation can probably never be employed in cases of accident; any injury which would necessitate disarticulation would injure the soft parts too high up. But for disease the advantages are,—"much less shock, less of the body is removed, the nerves and vessels are divided further from the trunk, where they are smaller; less hæmorrhage, the vessels divided are all branches of the femorals, though the anastomosis of the branches of the deep femoral, with branches of the internal iliac, makes it advisable to control the circulation in the common iliac during the operation; there are certainly fewer vessels to tie, and these smaller; the form of the flaps gives better drainage than the old method, in which the posterior flap formed a cup where discharges collected." "The results of a comparison of the two operations on the dead body were as follows:—A limb can be removed by either, without any hurry, in three quarters of a minute. The flap operation takes eleven seconds less than the Furneaux Jordan one; the length of the edges of the skin incisions in the former was 29 inches, in the latter 26 inches. The area exposed by the flaps was 40 square inches, by the other 64 square inches." The mortality of the flap operation for disease has been 40 to 50 per cent. Dr Maclaren collected from various sources 25 cases of the low amputation, of which 5 were fatal within a short time of operation, and 1 three months afterwards from visceral disease, giving a mortality of 20 or 24 per cent. This will probably be improved upon as the ideas of surgeons become more definite in regard to the conditions which justify the operation. These are,—acute necrosis of the head and any considerable portion of the shaft of the femur; extensive disease of the head of the femur and also of the pelvis; old-standing hip disease, with great exhaustion from long-continued discharge; when excision has failed; and, lastly, malignant disease of the femur low down.

Amputation after excision should be an infrequent occurrence. And it would be, if extensive pelvic disease or much general exhaustion were looked upon as contra-indications to excision. Amputation has the following advantages for recovery over excision:—It removes at once at least half the disease, it avoids the risk of pus collecting in pockets and infiltrating the muscular planes, the after-treatment is much less painful, and a larger blood-supply, and consequently a greater power of overcoming disease, is directed to the pelvis and its surroundings.

III.—RUPTURED URETHRA.

By M. J. Gardiner, M.B., L.R.C.S. Ed., House Surgeon in Mr Bell's Wards, Edinburgh Royal Infirmary.

William C., aged 19, engine-cleaner, was admitted to Ward XII., 10th January, complaining of pain about the abdomen. His friends stated that he had been squeezed that morning between an engine and waggon, and pointed to the pelvis as the part injured. On examination, patient was seen to be in a state of collapse, cold sweat upon the brow, breathing rapid and entirely thoracic. Locally, blood was issuing from the penis, and he was stated to have passed no water since the accident. Fractured pelvis and ruptured urethra were diagnosed. There was no swelling of scrotum or surrounding tissues. An attempt was made forthwith to pass a catheter. For some distance it passed all right, but just at the triangular ligament the joint was felt on a sudden to leave the middle line and pass into what seemed a cavity filled with some soft solid. Immediately blood, fluid and clotted, to the extent of about 2 oz., poured out. The catheter, however, did not enter the bladder, and further manipulation producing no better results, it was withdrawn. The urethra, then, was clearly ruptured, but whether the bladder was hurt or not was still undecided. Aspiration supra-pubically was next attempted, but owing to some defect in the mechanism, failed. A second attempt was then made to pass a catheter, and this time the very first trial succeeded. About 20 oz. of *clear* urine were drawn off. The catheter, a No. 12, was tied in, and the patient made comfortable in bed, hot fomentations being applied to the abdomen. At night the temperature was 100° F., and the patient slept well after taking 30 m. liq. morph. It was noticed, however, that the respirations were very rapid, and, on examination of the chest, the heart was found displaced to the right, and the right lung diagnosed to be consolidated throughout with breaking down at the apex. What had been an anxious case before was now deemed to be almost hopeless. The catheter was left in for four days and then withdrawn, the urine being clear and free from blood all that time.

After withdrawal the urine was at times clear, at times mixed with blood. Occasionally the urethra became blocked, but the introduction of a silver instrument always remedied matters, displacing the occluding cause, which was generally a clot of blood.

For some days patient rallied, but a temperature constantly above 100°, with profuse night sweats and cough, gave no great hope of recovery. On the 24th a swelling was noticed in the left iliac region. This was aspirated, and a quantity of decomposing blood drawn off. Pus also now began to pass in the urine, and on the 30th patient died.

Post-mortem examination of the parts concerned showed—

Thorax.—Heart flabby and drawn to the right. Left lung healthy; right collapsed, consolidated. Bronchi full of mucopurulent material; the tissue at the apex breaking down.

Abdomen.—Omentum black and disorganized. Peritoneum black, but no active peritonitis. Cavity full of pus. Urethra ruptured; the neck of the bladder and parts around in a state of acute inflammation and sloughing. A special dissection was made of the urethra, and disclosed the penile portion and tissues around practically normal, with the exception that on the under surface, about 2¼ inches from the meatus urinarius, there was a longitudinal opening into the urethra, the length of which (by tape measurement) was five-eighths of an inch. Behind this the corpus spongiosum could be traced backwards to the posterior portion of the bulb. Here the urethra had been completely torn across, and at the seat of rupture there had evidently been a large cavity in the cellular tissue, the walls of which were in a sloughing condition. This sloughing action affected also the membranous and prostatic urethra, extending to the rectum and up into the pelvis. The mucous membrane of the bladder was normal.

SERIES OF FRACTURES OF SKULL.

David P., age 20, was admitted to Ward XII., 8th January, complaining of injury to the skull. It was stated that on New Year's Day patient, while intoxicated, had been set upon by three men and thrown violently to the ground. For five hours he remained unconscious. For the next four days he had general convulsions of arms and legs, but specially of the right arm and leg. These had continued up to 8th January, and on that day he was admitted to the Infirmary. On admission, patient pointed to the left side of his head as the part injured. On passing the hand over the skull, a boggy swelling was found over the left upper half of the frontal bone, and over the first two-thirds of the left parietal, extending across the sagittal suture; but at that time no fracture could be detected. The head was shaved and blistered in the affected region, and the case carefully watched. Patient remained perfectly conscious; temp. and pulse practically normal. On two subsequent occasions slight convulsions were noticed, but with these exceptions the case was uneventful. The swelling gradually diminished, and in four days after admission had so far subsided as to disclose a fine fracture splitting the left upper third of the frontal bone, and extending into the upper part of the left parietal, losing itself at the suture. Patient was discharged 2nd February.

R. W., age 26, was admitted to Ward XII., 1st February, suffering from injury to face and head. His friends stated that he had fallen over a stair through a height of about 20 feet. At the time of entrance patient was under the influence of liquor, but knew what he was doing, and could answer any questions put to him. On examination, the lower jaw was found to be fractured at the angle, the front teeth were loosened, also the second molar, blood was issuing from the nose and from the left ear. Fracture of the base had therefore probably occurred. For the first three days or so there was little to be noticed about the case, thereafter the temperature began steadily to rise. Under treatment, however, it was lowered, and on the tenth day it was practically normal. Owing to the fracture of the jaw great irritation was caused about the parotid region, and two deep-seated abscesses resulted. These were successfully opened, and patient did well. Absolute diagnosis of fracture of the base was of course impossible, but, taking into consideration the height fallen, the head being the only part injured, with the bleeding from nose and ear, the probability is that it was correct. The remarkable part was the total absence of any loss of consciousness.

J. M., miner, was admitted to Ward XII., 16th January, 2 P.M., suffering from injury to skull. His friends stated that on the previous night, about half-past ten, the patient had fired a shot, and had gone into the seam to see the result (the seam would be about 2½ feet thick), while groping about a large lump of slaty coal, about 4 cwt. in weight, fell on the back of his head, and jammed it down on the floor. The following condition and injuries resulted:—When admitted, patient could stand and walk in a shuffling unsteady manner. If spoken to he answered tolerably correctly, but volunteered no remark of his own. While being undressed he gave intelligent assistance, and seemed to understand all that was being done for him. Slight contractions of both arms and legs were to be observed. *Locally*—On the back of the head a trifling scalp wound; in front a large swelling, covering the whole of the frontal region, and gradually losing itself in the scalp tissues above and around the coronal suture; both eyes shut, the upper eyelids swollen and filled with fluid, presumably blood; a lacerated wound over the root of the nose, and another over the left eyebrow. Such were the appearances. To touch, the swelling was tense but fluctuating, and was evidently fluid lying between the frontal bone and skin. On passing the hand forwards from the right parietal bone, pressing down a little firmly, the fingers suddenly fell into a deep depression; this depression, when fully traced, corresponded as nearly as possible to the coronal suture in its entire length, and had its ends joined by another along the foot of the frontal bone, just above the supraorbital ridges. So far the diagnosis was plain. The frontal bone had been almost entirely separated from its attachments and driven in between the parietals, with consequent depression upon the brain. The separation on the right side was about half an inch in depth, that on the left about a quarter of an inch. Was the fracture simple or compound? This the probe decided, proving neither wound to communicate with the break. The eyelids were forced open, and both pupils appeared normal, patient saying he could see with both. Pulse was 70; breathing regular and easy. What was to be the treatment? After carefully considering the case, it was decided to resort to no active treatment in the way of operation, but to let alone and watch for any symptoms which might demand interference. Accordingly, the head was shaved, continuous cold applied, and the patient made comfortable in bed. Shortly after being put to bed the patient lapsed into a drowsy, semi-unconscious state, at one time talking to himself, at another to imaginary friends—at all times, however, readily answering questions, and perfectly alive to external stimulus. This drowsy state was occasionally disturbed by fits of great restlessness; during these considerable difficulty was experienced in keeping the dressings on the head, patient displaying a marvellous aptitude for mischief. At times, too, there was slight delirium and desire to get out of bed. Up till the fourth day but little change was noticeable, the temperature and pulse remaining about normal; on the fourth day, however, the swelling over the frontal bone and in the eyelids began to disappear, being evidently blood in the process of absorption. As the blood was absorbed the frontal bone gradually rose into its place, and now is entirely replaced. On the seventh and eighth days after the accident the temperature rose considerably, and the pulse slowed to 60°; these phenomena, however, appeared to be due to constipation, for after a free motion the temperature fell, and the pulse rose again. On the eleventh day the temperature was 96°·4, and the pulse feeble and rapid; warm bottles, however, and hot beef-tea improved matters, and from that date patient steadily improved. The eyes opened on the tenth day, and at the present date patient appears to be nearly as good a man in every respect as he was before.

Curiously enough, there is no remembrance of the circumstances which led to the present injury; patient, indeed, goes back many years and connects it with a former head injury, of which the scar is still visible. What his normal intellectual state may be is difficult to judge, but, on the whole, he seems to be a person of no great mental power, satisfied with attempts at repartee, and full of the coarse, low wit common to his class, with a certain amount of natural shrewdness. For these and similar reasons, then, no active treatment was adopted; and as the patient has now gone out perfectly well, we may conclude that in this case, at any rate, the course pursued was right.

On the day after the admission of J. M., another fracture of the skull was brought to hospital, and as it has some additional points of interest, we have recorded it as the crowning one of the series reported.

J. B., miner, was admitted to Ward X., 17th January, suffering from injury to skull. The friends accompanying him stated that he had been struck on the forehead by a piece of flying metal. On admission patient was dull and stupid, but by no means unconscious; he could walk or stand by himself, and answered any questions put to him. On examination, a large lacerated wound, bleeding pretty smartly, was seen over the root of the nose, extending up the frontal bone for about an inch and a half; the tissues around were swollen and puffy. Both eyes were shut, the upper eyelids swollen. A circular depression of rather more than an inch, and less than an inch and a half in diameter, was felt implicating the area occupied by the root of the nasal bones, the ethmoid, the parietal sinuses, and part of the frontal bone. The lacerated wound communicated freely with this, and when the finger was introduced the bones were found to be in a state of powder. Here, then, a compound fracture had to be dealt with. Operative interference, beyond cleaning the wound and picking away the powdered bone, was deemed unnecessary at the time; patient was therefore put to bed, the lacerated wound dressed, and cold applied to the head. Temperature at night was 98° F., pulse 60, respirations regular and easy. Next day there was no change; patient quiet, but sensible; drowsy, but readily awakened, and obeying every request readily and at once, showing no loss of power to answer to external stimulus. At night the temperature was 100°, and inflammation had evidently set in about the wound; the pulse was only 55 however. Temperature still rose, and on the 19th was 102°; a free discharge of pus, however, brought it down, and on the 21st it was normal; after that it rose again. Brain substance showed itself through the wound, and continued to squeeze out till the 25th, when it stopped, no attempts being made to reduce it by pressure, or by slicing it away. The lacerated wound now healed rapidly. Patient, however, became unconscious, and could scarcely be roused. From this date the temperature steadily fell, till on the 31st, or fourteen days after admission, it was normal. On the night of 1st February, however, it rose rapidly, and finally attained 104°. Probing of the wound, however, which had almost healed, allowed a quantity of pus and some small pieces of bone to escape, and forthwith the temperature again fell. Slight paralysis of the right arm and leg ensued.

After the evacuation of the pus, patient again began to answer questions, and to notice what was done to him. At present the wound is entirely healed; the depression in the skull is filling up. Temperature and pulse are normal. Patient is still lethargic, but with signs of returning intelligence. Great difficulty was experienced for some time in getting him to swallow anything; consequently he is greatly emaciated, and the vital powers are at a low ebb; as consciousness returned, however, more food was swallowed, and now the whole system is improving. So far it would seem as if recovery was certain. A curious condition, however, exists at present, viz., that patient seems to have lost entirely the command of words, Yes and No constituting his whole vocabulary. To any question where neither are applicable, no answer is returned; and in making known his wants signs are employed, or any words remaining to him misapplied. At times he seems to struggle with the ideas, and endeavours to put them into words; the eyes brighten, the face becomes eager, and the lips move, but the words are forgotten, and no sound is produced at all, or merely an inarticulate grunt. So far the case is favourable, strength is being gained every day, intelligence is returning, and although to prophesy perfect recovery is still impossible, yet everything points in that direction.

On reviewing these four fractures little need be said of the first two. To neither does any special interest belong, beyond what is usually attached to injuries of the head. In neither could there be the least doubt as to the treatment, and in neither was there any symptom of importance, unless we notice the few convulsive movements manifested in the first, and the entirely negative characters of the second.

With the others, however, the case is different. Each from its nature presenting remarkable phenomena of its own, whether we consider in both the parts damaged, the damage itself, the recuperative power displayed by Nature to repair that damage, or the treatment adapted in both. Both are serious fractures; in both the area injured is wide, yet in neither have there ever been any symptoms specially indicative of danger, nor yet of great mental irritation, showing that as far as mere life is concerned, with bodily power, injury to the frontal area appears to be of no great moment. It may be asked, why in either case were not attempts made to trephine or elevate?

Dealing with that of J. M. first, the reasons were several:—1st, The injury had been received sixteen hours before admission, and therefore the excuse of immediate need could not be made. 2nd, At the time of admission there were no symptoms calling for operative interference. 3rd, Operative interference would have changed a simple into a compound fracture, and thereby added fresh dangers, no matter how carefully done; moreover, the area injured was so great that had the bone been removed, extensive hernia must have followed, and even if only elevated, the necessary manipulations would almost certainly have more or less injured the hair coverings, if not the hair itself. In fact, exaggerate the case of J. B. and we have that of J. M., after operation. For these and similar reasons the operative interference was negatived, and the result has justified the course pursued.

Are the same answers applicable to the other? For here there was a compound wound already, and beyond doubt little splinters of bone. They are pressing upon the membranes. We think they are, in spite of the dictum, "in splintered fractures trephine." For here, as before, considerable time had elapsed, and as in the other, so in this, no symptoms were present justifying interference. It may be said you had no right to wait for symptoms, for you were sure to have compression sooner or later, or at all events meningitis due to the laceration and tearing of membranes by the splinters of bone. But let us remember, in the first place, that the injuries in no way affected the vital centres, and that compression on the frontal area is not necessarily dangerous to life unless carried to an extent beyond what is usual; moreover, the nature of the wound allowing the brain to escape acted in some measure as a safety valve. Again, too, weigh the damage already done by the splinters of bone to membranes and hair, probably at its height and not likely to be increased against the certainly greater damage that their operative removal would have caused, and add to that the area of bone which would have required removal, with the greater hernia that would have resulted, and on the whole the treatment adopted appears again to be the better. Finally, although no argument, the one patient has entirely recovered, and the other seems in a fair way to do so.

It is difficult to account for the escape from meningitis in the first case, unless it may be that the area of pressure being so diffused was proportionately less in intensity; to the same fact may perhaps also be attributed the remarkable replacement of the bone, the intra-cranial pressure having a large surface to work upon, and being thus placed in the most favourable circumstances for action as soon as the abnormal pressure outside, due to the effused blood, should begin to subside.

IV.—ON EXFOLIATING CYSTITIS: WITH A CASE.

By Jamieson B. Hurry, M.B., etc., St Bartholomew's Hospital, London.

The following remarks refer to a rare form of cystitis, the characters of which are well illustrated by a case which occurred under the care of Dr Matthews Duncan, to whom I am indebted for permission to publish it.

Under the names of croupous, diphtheritic, pseudo-membranous, plastic, exudative cystitis, a number of cases have been grouped in which membrane-like substances were discharged from the bladder. Thus Coulson,[1] speaking of these cases, says:—"In the croupous and diphtheritic form of cystitis, layers of false membrane are found adhering to the surface, or the deeper layers of the mucous membrane are infiltrated with plastic material; and in addition to the detachment of epithelial cells, necrosis of large portions of the mucous membrane has occasionally been observed."

Gross[2] divides these varieties of cystitis into croupous and diphtheritic, meaning by the first, cases in which inflammatory new material is attached to the surface of the mucous membrane, and by diphtheritic, cases in which there is infiltration of the subepithelial connective tissue, with germinal cells preceding the discharge of a cast.

Sir Henry Thompson[3] speaks of this form of cystitis as characterized by the formation of a false membrane.

The loose way in which these terms are used is very objectionable. The membrane referred to is indeed in some cases due to an exudation, and may be spoken of as a false membrane. But in most it consists of the mucous membrane with the submucous tissue, and it may even consist of large portions of the muscular coat of the bladder, as I shall hereafter show, and to speak of all these varieties as diphtheritic or croupous cystitis, or to apply to them any of the names given above, is unscientific and misleading. If the terms diphtheritic, croupous, or pseudo-membranous cystitis are allowable, they should be restricted to cases in which a pellicle is formed by an exudation from the mucous membrane, though even as thus restricted, it would perhaps be best to apply the term diphtheritic only to those in which there is evidence of the presence of false membranes on other mucous surfaces. I suggest the name "exfoliating cystitis" (cystitis exfoliativa) for all cases in which one or more true coats of the bladder are discharged, and it is to a consideration of these that I must limit myself. As having some connexion with my subject, I may refer to a paper by Krukenberg[4] on gangrene of the bladder after retroversion of the gravid uterus, but must content myself with this brief notice.

Exfoliating cystitis has been noticed more frequently in women than in men, a fact which is probably due to the larger size of the female urethra, through which, even when dilated to its utmost, considerable pieces of membrane have great difficulty in passing; *a fortiori*, a similar membrane will have yet greater difficulty in passing through the male urethra, and its presence therefore may be overlooked.

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[1] *Diseases of the Bladder and Prostate*, p. 117.

[2] *Diseases of the Urinary Organs*, p. 27.

[3] *System of Surgery*, vol. iii. p. 183; *cf.* also *Podraski, Pitha, and Billroth's Surgery.*

[4] *Archiv für Gynækologie*, 1882; *cf.* Rivington, *Rupture of the Urinary Bladder*, p. 113.

The disease is almost always due to acute retention of urine.[1] As exceptions to the rule, I may refer to a case published by Sir Spencer Wells,[2] in which exfoliation took place after a forceps labour in which there was no retention; and to the case of Mr Liston,[3] in which it seems to have resulted from an injury to the bladder. It is said also to have resulted from enlargement of the prostate.[4]

In reference to the structure of the exfoliated membranes, there is considerable difference: sometimes only the mucous membrane comes away, incrustated with phosphatic deposits from the urine. In the Museum of St Bartholomew's[5] is the whole of the mucous membrane of a woman's bladder, which came away after retention of urine due to retroversion of the gravid uterus, which had become impacted. There is another specimen in the Museum of the Royal College of Surgeons[6] of the whole of the mucous membrane of a male bladder. The man from whom it was taken fell from a scaffold, and, in consequence, suffered from retention of urine. Mr Liston cut into the bladder from above the pubes, and allowed a membrane to escape, which proved to be the mucous membrane which had become detached. This is the commonest[7] form of exfoliation, and occurred in the case related below. The membrane is usually flocculent and incrustated by phosphatic deposit, making it feel like sand-paper.

Sometimes, however, portions of the true muscular coat are cast off, as happened in a specimen now in University College Museum.[8] It is composed of portions of the muscular wall, as well as of the mucous and submucous coats, and forms a sac as large as a distended bladder. The membrane was passed "per urethram" six weeks after a forceps labour. The patient for a time suffered from incontinence of urine, but eventually recovered entirely.

Still more curious is a specimen described by Schatz,[9] which was most carefully examined under the microscope. It was taken from the bladder of a woman who had suffered for 1½ week from retention of urine due to impaction of the retroverted gravid uterus. The latter could not be reduced, and abortion was brought on, two days after which the woman died. On opening the bladder, post-mortem, its cavity was found lined by urinary deposits and in it a sack, which on examination was shown to consist of the whole of the mucous and the greater half of the muscular coat. This sack was almost free, being adherent only to the neck of the bladder by some shreds of fibrous tissue. It was evidently in a state of necrosis. Wittich[1] has recorded a case in which exfoliation of the mucous membrane took place, and some days later a large piece of the muscular coat followed, which by the size of the muscular bands was evidently greatly hypertrophied. In this case, as in that of Schatz and others, a careful microscopical examination[2] was made, so that no doubt remains that the true coats of the bladder were exfoliated.

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[1] *Obstetrical Trans.*, iii. p. 354; *Archiv für Gynækologie*, i. p. 469; *Virchow's Archiv*, vii. p. 30.

[2] *Obstetrical Trans.*, iii. p. 417; and *cf.* also v. p. 186.

[3] Museum of Royal College of Surgeons, Pathological Preparations No. 1993.

[4] *Archiv für Gynækologie*, i. 469.

[5] No. 2409.

[6] Pathological Preparations, No. 1993, described in *Obstetrical Trans.*, 1863, p. 16.

[7] *Monatschrift für Geburtskunde*, xxxi. p. 132; *Medical Times*, 1863, pp. 522, 678.

[8] No. 1466.

[9] *Archiv für Gynækologie*, i. 469.

As regards the pathology, some experiments made by May[3] are of interest. He caused retention of urine in dogs by artificial means, and found that, as a consequence of retention, the mucous membrane was detached from the muscular coat. Between them blood was effused, and the largest blood-clots were found at the portion furthest from the neck of the bladder.

In several post-mortems on record the mucous membrane has been found detached everywhere, except at the neck of the bladder;[4] here, then, detachment seems to take place last, and it is not unlikely that it commences at the portion farthest from the neck where the external pressure which resists the dilatation is least.

An interesting specimen exists in the Guy's Hospital Museum,[5] in which an effusion of blood has taken place beneath the mucous membrane, raising it into nodular elevations, and in all probability constituting the first step towards detachment. If this view be correct, and May's experiments point in the same direction, the detachment is a secondary result of over-distention. The pressure of the urine on the stretched mucous membrane may be quite sufficient to cause gangrene, by interfering with the normal blood-supply.

Whether the mucous membrane can be reformed after exfoliation we do not know. The complete recovery which has occasionally taken place makes it probable that some regeneration is possible, but we have no direct evidence on the subject. The prognosis in all these cases is very serious; what percentage terminates fatally we have not sufficient statistics to decide. Complete recovery, that is, recovery with perfect control over the bladder, is extremely rare.

There are several points of clinical interest well illustrated by the case which follows.

For several weeks after the exfoliation, the urine contained a very large amount of albumen, far more than could be accounted by the pus present. It varied from $\frac{1}{2}$-$\frac{1}{8}$ for many days. The idea of nephritis seems to be excluded by the complete absence of anasarca, pain in the loins, and casts in the urine. Can it be that an exosmosis of serous, that is, albumen-containing fluid, takes place into the bladder deprived of its mucous membrane, in the same way that an albuminous fluid oozes from the surface left by a blister? Are we to explain the diminution of albuminuria which at last took place by supposing the reproduction of a mucous membrane? I have no other case to refer to in which observations have been made.

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[1] *Neue Zeitschrift für Geburtskunde*, vol. xxiii. p. 103.

[2] Schatz, *Archiv für Gynækologie*, vol. i.; Luschka, *Virchow's Archiv*, vii. p. 30.

[3] *Inaugural Dissertation*, Giessen, 1869.

[4] Schatz, *Archiv für Gynækologie*, vol. i.; Coulson, *Diseases of Bladder and Prostate*, p. 123.

[5] No. 2089.

The absence of pain after the exfoliation is noteworthy. Is it to be associated with the fact that the sensory nerves which lie in the mucous membrane were destroyed by the process of sloughing?

As regards the diagnosis of exfoliating cystitis, there can be little difficulty if the membrane has been voided "per urethram." It is true that it has been mistaken for pieces of decidua and dysmenorrhœal membranes, but the presence of phosphatic deposits, the history of cystitis, the difficulty of expelling large membranes,[1] and the subsequent patulous condition of the meatus urinarius,[2] should be sufficient to clear up any case. For discussions as to the genuine nature, or otherwise, of membranes said to have been passed through the urethra, I must refer to the original accounts.[3]

Difficulty arises when nothing is expelled, and it is in these cases that interference may be called for. Suspicion should be awakened whenever, after retention of urine, the catheter fails to empty the bladder. Cases[4] are recorded in which the membrane has prevented more than a few drops of urine passing through the catheter, though the bladder was much distended. Luschka's case[5] illustrates these points well. For details of great interest I must refer to the original; room will only allow of a summary.

A woman, 20 weeks pregnant, was suddenly seized with retention of urine, which was probably due to impaction in the pelvis of the retroflexed uterus. It was, however, not diagnosed, and after about three weeks spontaneous replacement seems to have occurred. Towards the end of this period a catheter was at length introduced, but only a few drops of urine were voided. After fruitless catheterisation, the woman's symptoms became so alarming that it was decided to puncture the bladder above the pubes, when a large amount of ammoniacal urine was let out. The patient, however, died very soon after. Post-mortem, the neck of the bladder was almost completely closed by the mucous membrane, which had been completely detached and caused retention. When the catheter was introduced, it had glided between the exposed muscular coat and the detached mucous membrane, and had not reached the cavity containing urine. Apparently the displacement of the uterus caused retention of urine, which led to detachment of the mucous membrane. The latter prevented the effectual use of the catheter, and at last, when it was too late to save the woman's life, the bladder was punctured. There can, I think, be little doubt that if the true state of things had been suspected, the detached membrane might have been removed. This, indeed, has been done, though sometimes it was found necessary to incise,[1] or dilate the urethra previously. In a male, removal has been effected by opening the bladder above the pubes.

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[1] *British Medical Journal*, 1871, pp. 566, 613, 669.

[2] Moldenhauer, *Archiv für Gynækologie*, v. p. 108.

[3] *Pathological Transactions*, xiii. p. 150; *Obstetrical Transactions*, iii. p. 417, and iv. p. 13.

[4] *Archiv für Gynækologie*, vol. v. p. 108.

[5] *Virchow's Archiv*, vii. p. 30.

I will now give some details of the case which occurred lately in St Bartholomew's Hospital, London.

Jane M., age 34, married 10 years; two children, no miscarriages. Catamenia commenced at 10½ years. Since her last confinement they have been regular till 4½ months ago, when they ceased. She thinks herself pregnant.

Three weeks ago she began to experience difficulty in passing water, and could only do so when straining severely. Nine days ago the urine stopped altogether, and was drawn off by catheter several times. She was in "dreadful agony" before this was done. Her urine has dribbled away from her constantly for the last three days.

Admitted Jan. 2nd, 1884, complaining of inability to micturate. She says that 1½ hour before admission, a doctor drew off about three pints of urine. In the surgery her bladder was found to contain half a pint (sp. gr. 1023, strongly alkaline, much blood and pus, triple phosphates under the microscope). The lower half of the abdomen was very prominent, dull and streaked with distended lymphatics; an indefinite swelling could be felt in the hypogastrium. Per vaginam, the cervix uteri could be reached with difficulty high up behind the symphysis. Behind it a large elastic swelling was felt extending nearly down to the perineum; the posterior wall of the vagina was very lax, thrown into deep folds. Retroversion of the gravid uterus, with impaction, was diagnosed.

On admission to the ward, the patient was placed in the genupectoral position, and pressure applied to the swelling by means of the hand in the vagina. It could be displaced to a considerable extent, but not reduced; as soon as the woman assumed the lateral position the swelling resumed its former position. A large air-bag was therefore inserted into the vagina and distended with air. Pulse 120; tongue furred.

At 10 P.M. the same day, 24 oz. of urine were drawn off by a catheter, which went in 9½ inches.

Jan. 3rd.—Slept well after a morphia draught. The air-bag was removed and the uterus found to have resumed its proper position. The catheter was passed twice this morning—¾ pint drawn off each time. Urine 1016, blood, pus, albumen. Dr Matthews Duncan saw her the same day. Hypogastrium somewhat prominent; a tumour can be felt closely resembling a 5 months' pregnancy, dull to percussion. Per vaginam, cervix uteri in natural situation.

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[1] *Pathol. Trans.*, xiii. p. 150.

DB. . . .	8¾	inches.
Crests, . .	10½	„
Spines, . .	9½	„

Jan. 4th.—Has passed 4 pints of urine in 24 hours, some of it without the help of a catheter. Urine 1020, alkaline, contains much blood and pus. Complains of slight pain in lower back.

Jan. 5th.—Passed 3 pints of urine by herself. Pulse 110; tongue dry.

Jan. 7th.—No pain except on micturition, which is frequent. 2¾ pints of urine, 1024, alkaline, contains much pus, blood, and albumen.

Jan. 9th.—She passes urine about every hour; it is still loaded with pus and blood. Her bladder was carefully measured; sound only goes in 3½ inches.

Jan. 14th.—There is now total incontinence of urine and considerable pain in the bladder. She passes about 2 pints of urine daily (sp. gr. 1017), faintly alkaline, pus, 1/16 alb.; no blood or bacteria.

Jan. 17th.—Urine runs away constantly, 1017, ½ alb., contains crystalline phosphates, no casts, a few pus and blood-cells. No œdema or other signs of nephritis; no retinitis.

Jan. 19th.—Severe bearing down pains came on closely resembling labour pains. Something, which looked like a slough, was seen protruding from the urethra, and the patient therefore taken into the theatre, and the bladder was washed out with a double-channelled catheter. The pains continued very strong and, after a few minutes, a large slough came away (measuring 3½ by 2½ inches), as well as several small pieces. Its expulsion was followed by a gush of urine expelled with great force.

Jan. 20th.—Patient looks very ill. Pulse 135; respiration 35; complains of a feeling of nausea. Urine 1018, smoky, ½ alb., triple phosphates; only a few blood-cells.

10 P.M.—Two hours ago very strong bearing-down pains came on, indistinguishable from labour pains. To all appearance abortion was about to take place, but on vaginal examination the os uteri was found not to be dilated; there appeared, however, to be considerable tension and fulness as well as tenderness in front of the cervix; no "show." 15 grains of chloral and 20 of potassium bromide were administered.

Jan. 21st, 2 A.M.—Something like a slough was seen to protrude from the urethra; she has had no sleep; the pains continue as strong as ever. About three-quarters of an hour later another slough was expelled, quite as large as the first, and followed by a gush of urine, estimated at about ¾ pint. The pains preceding the expulsion were very strong, and the patient herself thought that a fœtus had been expelled. A slight rigor took place at the same time and the temperature went up to 103°. A period of exhaustion of about ¼ hour followed just as after an ordinary labour.

11 A.M.—The incontinence of urine continues; skin very moist. Pulse 145. Urine is very bloody, alkaline, contains much pus and albumen. The orifice of the urethra is greatly dilated.

Jan. 22nd.—Has had a good night, but complains of great thirst. Pulse 120. Bowels open. Bladder measures 4 inches.

Jan. 24th.—Bladder was washed out through a double-channelled catheter, with a lotion consisting of 1 grain of quinine to the oz. An attempt was made to keep the bed dry by keeping a soft catheter in the bladder. Several sizes were tried, but with only partial success, and the discomfort it gave compelled its discontinuance after a few days.

Jan. 26th.—Pulse 135, respiration 35. Bowels freely open. Urine alkaline, 1017, ¼ of alb. No blood, but some pus cells under the microscope. The bladder was again washed out with a quinine lotion.

9 P.M.—Patient is very restless and unmanageable. Chloral syr., ♏. xxx., and pot. brom. gr. xxx. given and repeated in three hours. The bladder was washed out as on the 26th. The labia are much inflamed by the continual discharge of urine. On separating them the urethro-vaginal septum looks very unhealthy; it is œdematous and inclined to slough.

Jan. 28th.—The bladder is washed out daily with a lotion of 1 gr. of quinine and 4 minims of dilute sulphuric acid to the oz. A portion of the anterior vaginal wall is sloughing, and can be seen by separating the labia.

Jan. 31st.—A careful examination of the urethra and vulva was made. The slough referred to above has come away. On introducing the catheter, it passed through the urethra for half an inch, when it could be felt in the vagina. The slough therefore consisted of the urethro-vaginal septum, and has left a gap nearly an inch long. Through this gap the finger was readily introduced into the bladder. On doing so, its interior was felt to be coated with phosphates, but uniform, thus showing in all probability that the whole of the mucous membrane had been discharged. If portions had been left the exploring finger would have discovered irregularities.

Feb. 4th.—Patient sat up for a few minutes during the day; feels very feeble. She began to ramble towards night. Urine 1022, ⅛ alb., some pus and bacteria. It continues to dribble from her night and day. The abdomen is more distended, there is dulness up to the navel. Fœtal movements felt frequently of late. There is no pain.

Feb. 7th.—Dr Matthews Duncan passed a sound into the bladder, which was found to measure 3 inches. The finger can be introduced through the urethro-vaginal fistula into the bladder, which is found to contain phosphates. Urine 1015, ⅛ alb., a few pus cells and triple phosphates under the microscope. Patient complains of no pain; there are no symptoms of nephritis.

Feb. 9th.—The bladder has been washed out every second day lately with an acidulated lotion; several small sloughs encrusted with phosphates have come away. Patient expresses herself as relieved by the washing.

Feb. 17th.—Patient is wearing a urinal, and is able to get about the ward a little; feels very feeble when up. There is not the slightest sign of the bladder regaining the power of retaining urine.

Feb. 26th.—Bladder measures 3¼ inches from the external orifice of meatus urinarius. Urine 1016, alk., ⅓ alb., a little pus. Patient was discharged in fairly good health, but without any control over her bladder.

March 15th.—Patient was visited and the urine examined. Sp. gr. 1020, alkaline, no pus, albumen ⅛th, triple and amorphous phosphates. Her general condition is very bad; the continual dribbling of urine is an intense source of irritation; her appetite is bad. No urinal can be worn owing to the inflammation of the labia. Her mental condition is affected.

March 23rd.—Premature labour was induced by a catheter inserted between the uterine walls and the membranes. An 8 months' child was expelled the following day, unhappily still-born.

The mother improved rapidly. Her appetite and strength returned at once, and all bad symptoms except the incontinence of urine disappeared.

April 14th.—Patient is doing very well; general health good, and she has regained partial control over her bladder, being able to retain urine for an hour at a time. The following are its characters,—specific gravity 1020, neutral, trace of pus and albumen, triple phosphates.

A microscopical examination of the membranes expelled from the bladder was kindly made by Mr Bowlby, late curator of the museum, who found them to consist of the mucous and submucous coats. No portions of the muscular wall were identified.

V.—CASE OF DISLOCATION OF THE WRIST.

By John Cochrane, L.R.C.P. and L.R.C.S. Ed., Medical Officer, Fort Augustus.

In the month of September last I was summoned to see a young gentleman, a pupil attending the College attached to St Benedict's Abbey here, and who was said to have injured his wrist. On reaching him I found him stretched on his bed in the dormitory, and complaining of most excruciating pain on the least movement of the arm. I was informed that he had been, along with other boys, amusing himself by some games, and that in turning a corner suddenly he had come in contact with another boy. Both having been running at great speed a collision was unavoidable, and in order to break the shock my patient had held up his hand and received the impetus on the palmar surface with such violence as to immediately throw the wrist out of joint. I saw him almost immediately after the accident occurred, and the sufferer seemed to be in great distress. I had him as soon as possible removed to the Hospital of the College, and as any attempts at examination of the injured part were acutely felt, I put him thoroughly under chloroform, and was then enabled quite easily to reduce the dislocation. I may mention that the physical signs of dislocation were quite evident, and there was thorough distortion. When the dislocation was reduced all pains and distortion vanished, and the patient on recovering from the effects of the anæsthetic remarked how glad he was to be relieved so quickly.

I, however, placed a splint along the palmar surface and bandaged the hand and arm, and ordered perfect rest. In the evening I saw him again, and he still felt very easy. In the course of the next day, however, considerable swelling of the tendinous sheaths of the muscles of the arm appeared, and there was now considerable pain in that direction. This was evidently due to the amount of stretching, etc., which the muscular structures had undergone.

Under the effects of turpentine stupes, and laudanum locally applied, swelling and pain rapidly subsided, and the patient made a rapid progress towards recovery. The temperature never went very high during this attack of inflammation. For a few days afterwards he wore the arm in a sling. He has now perfect use of the joint and suffers from no bad effects.

As such an accident as dislocation of the wrist-joint, *without fracture of radius*, is such a rare event, and its occurrence having even been denied by some surgeons, I am anxious to put this case on record. The late Professor Spence of Edinburgh states in his "Lectures on Surgery" that he had never during his course of practice met with a recent case of such, but that he had seen some old-standing one. There is not the least doubt it is a most uncommon accident, as surgical literature abundantly testifies.

VI.—CHRONIC POISONING BY BISULPHIDE OF CARBON.

By ALEXANDER BRUCE, M.A., M.B., F.R.C.P.E., Lecturer on Pathology, School of Medicine, Edinburgh.

(*Read before the Medico-Chirurgical Society of Edinburgh*, *2nd April* 1884.)

THE following three cases of this form of poisoning came under my observation at the Western Dispensary, Fountainbridge, and seem worthy of the attention of the Society, as they are apparently the first described in this country. The subjects of it worked in the "curing-house" in one of the rubber-works here, their duties requiring them to dissolve chloride of sulphur in bisulphide of carbon, and to superintend the working of the machine for vulcanizing the cloth. They are thus almost continuously exposed to a more or less concentrated atmosphere of the bisulphide.

CASE I.—J. M., a healthy looking man of 49 years of age, with an unexceptionable family and social history, was the first to work in the "curing-house." For six years he had been employed in the same factory as a "spreader" of the rubber dissolved in naphtha on the cloth. Though much exposed to the naphtha vapour, he never suffered in the very least from it. About September 1880 he was transferred to the "curing-house," where for about two years, owing apparently to his not having been very closely confined to the work, he does not seem to have suffered very much beyond occasionally vomiting his food—an act which was always followed by immediate relief from the nausea produced by the inhalation of the vapour. About October or November 1882, a change in the mode of manufacture led to greater concentration of the vapour; and J. M., who was now constantly exposed to its influence, immediately began to suffer. He lost first appetite for his evening meal, became more frequently sick, vomiting always relieving the nausea as before. (J. M., who is a perfectly temperate man, tells me that he sometimes took a glass of whisky to induce emesis, which it did at once.) He found himself unable to retain his urine for above an hour, and states that the act of micturition was often accompanied by a feeling of scalding, and followed by a discharge which stained his linen. He became easily fatigued, feeling constantly, on the slightest exertion, as if he had walked many miles. On this account, and partly because of a severe pain in the loins, induced by the sitting posture, he generally went to bed on returning from work. He became listless; talking and being talked to were alike a trouble to him. Then he seems to have been at times nervous and easily agitated, at others half stupid, almost entirely losing his memory, and imagining that he was going to lose his reason. At night he slept little: he had horrible dreams of falling over precipices, being hanged, committing murder, etc., and would frighten his wife by shouting aloud, starting up with the terror, and throwing his arms about wildly. On no occasion were his dreams of a pleasant nature. He rapidly lost all sexual desire and power. In December he broke down, and was confined to bed for six weeks, with great weakness in the limbs, a feeling as if the left leg were paralyzed, numbness and coldness of the feet and legs (which had lasted a long time), cramps in both calves, and dilatation of the veins of the right leg. During these six weeks the appetite was very good. At the end of this time, though not fully recovered, he returned to work, the feeling of weakness and numbness in the limbs still persisting to some extent. All the symptoms got gradually worse again, but he continued at work till about the middle of April, when he began to observe that his vision was not quite so clear as formerly. About the end of the month, after a more than usually prolonged exposure to the bisulphide, he became very sick; was seized with a "cold trembling all over." To throw off the feeling of nausea, he went into the open air, and was surprised to find, after an attack of vomiting, that he had lost the power of distinguishing objects, and that everything appeared of a bluish green hue. He says, "Everything looked as if seen through a greenish veil. I could not see the telegraph posts on the opposite side of the road, nor the clock in the steeple of the Dalry church, nor some cows 30 yards off; and yet I had plenty of light, but could only distinguish large objects quite near me." There was no night blindness. This curious condition persisted, and he says that he could not recognise his own son in the middle of the street; that he one day lost two of his sons who had strayed a little way from him on the road in the Queen's Park. Perception of small objects was so enfeebled that he could not distinguish even the type on the page of a newspaper from the unprinted margin; both were alike of the same greenish tint. He tried glasses on his own account, but found none to improve vision. He states that perception of moderately near objects was improved by means of an opera-glass, but that he could not by its aid see Inchkeith from Leith Pier. He managed to continue at his work somehow for about another fortnight, when he went to the Eye Infirmary in Cambridge Street, where he says it was found that he could only read the largest of Snellen's types on approaching it very closely. Vision was not improved by either convex or concave lenses. Atropine was dropped into each pupil, and an ophthalmoscopic examination made; but what was found, it is now impossible to say. A curious condition of vision followed: for a day afterwards everything appeared red, or rather rose coloured, instead of green. (His other special senses do not seem to have suffered in any way. He complains of having had a constant cold band extending round his forehead back to the occipital protuberance. Unlike the other cases, he does not seem to have lost flesh to any remarkable extent.) He went to the country for eight weeks, where he gradually improved; the feeling of weakness passed off from his limbs. In seven weeks the green vision had gone; he began first to see objects at a distance, and after three or four months he could see to read with glasses (of 2·5 D) perfectly. On examination (2nd April) the pupils are equal, of moderate size, react normally. There is 1 D of hypermetropia; the fundus oculi is quite healthy, and shows no trace of any previous disease. There is no colour-blindness. His other symptoms also gradually left him, and he is now, intellectually and physically, "as good a man as ever he was," as he says.

CASE II.—G. P., æt. 49, married, of temperate habits, and previously always fairly healthy; has been employed for a year in the same factory, at first as a general workman, and later regularly in the "curing-house," for about ten hours daily. For two months he did not feel any marked symptoms, except that occasionally his eyes would water profusely, and that he would feel dizzy, especially late in the day, and when walking home from his work. After this period he became rapidly worse, and began to feel that he was really ill. He lost appetite, and had a constant feeling of nausea, and after a short time vomited the greater part of his meals. He felt always tired, and on returning from work generally went straight to bed, or remained sitting in a listless condition, not caring to speak or be spoken to. He was not breathless on exertion; had no palpitation; no cough except when exposed to very concentrated fumes of the vapour in the workroom. He became unable to retain his urine for any length of time, and during the last two weeks of his work it was passed with some pain and difficulty. He became pale and emaciated. His hands, forearms, feet, and legs felt cold and benumbed, or tingling. There were frequent and severe cramps in the legs. He soon became so feeble that he could not do the work of a small boy, and that he could only walk on a level floor, and that he had to be assisted up and down stairs to and from his house. He seems to have got rapidly worse during the last three weeks of his work in the factory. He found himself sometimes, on coming home in the evenings, excited as if with alcohol, but never so bad as to be unaware of what he was doing. Generally, however, instead of being excited he was dizzy and stupid. He suffered from intense headaches, reaching from the root of the nose round the head to the occipital protuberance. His sleep became unrefreshing, and was broken by dreadful dreams, of falling down precipices, etc., from which he would awake with a start and find himself bathed in perspiration. His memory became greatly impaired, and during the last fortnight of his work he was often at a loss for words to express himself. His special senses did not suffer in any way. After continuing at his work, and becoming daily weaker for three weeks after the first symptoms manifested itself, he was removed to another part of the work, in the hope that a healthier atmosphere would restore him. His change did him no good, and he was dismissed as being of no further use on the works. So weak was he that he had to rest several times on his way home, and had to climb up stairs on his hands and knees to his house, and across the floor into bed, where he lay exhausted for some hours.

When I saw him first he was sitting up in bed with a wearied, listless expression, with his head bent forward on his chest. He replied to questions with the air of one extremely exhausted from over-fatigue. On general examination, there was nothing marked on the skin, but there was almost complete absence of subcutaneous fat, and great diminution in the size of the muscles.

In the *alimentary system*, there is still great anorexia, but now nothing else worth noting. He states that previously all his food tasted of the bisulphide of carbon.

The *circulatory system* shows nothing abnormal except a pulse of 92 per minute, a rate which increases to 110 on assuming the erect position. It is regular, and of fair volume. On examination of the blood the hæmocytes and hæmoglobin are not diminished.

The *respiratory system* is found, on physical examination, to reveal nothing worth noting. The breathing is like that of an over-tired man.

Genito-urinary System.—The urine is of specific gravity of 1020, acid, free from deposit, albumen, or sugar, and passed without scalding.

All sexual desire and power vanished after he had been at work in the curing-house for a week or two. (There was no previous increase.) The testicles are somewhat atrophied.

Integumentary System.—Absence of subcutaneous fat, and great increase of hair on forearms.

Nervous System.—Great pain and pricking in the hands are induced by washing them under a tap with cold water. Sensibility to tactile, thermal, and painful stimuli were found unimpaired. The legs are cold to the touch from the knee downwards.

On ophthalmoscopic examination, there is no evidence of present or previous disease. The pupils are of medium size, and contract normally; convergence good; no strabismus. The other special senses are in no way impaired.

Motor Functions.—Organic reflexes normal. Skin, patellar, and other tendon reflexes could not be elicited.

His muscular system was so enfeebled that he could not rise from or sit down upon a chair without the aid of his upper extremities. When placed prone on the floor he can only, and with difficulty, raise himself on to his knees, and is quite unable to get upright on his legs without assistance. In walking, the steps are extremely short, the sole of the advancing foot is brought flat to the ground, while the knee, after giving way slightly, is extended with a jerk before the next step is taken. Turning is impossible unless he is supported by some object. The flexors of the fingers are so feeble that the act of shaking hands is impossible, and the index of a dynamometer cannot be moved from zero with the right hand, and only to 5 lbs. with the left. The flexors of the forearm are very weak, especially those of the right side. The other muscles of the arm are so much affected that he cannot place one of his hands behind his head without assistance, nor can he shave himself. When he attempts to raise a tumbler of water to his mouth he can only clutch it with great effort, and he has to hesitate for some seconds before beginning to raise the vessel. During the act there is much fibrillary tremor in the muscles of the forearm, but the vessel is carried up fairly steadily, and there is no shaking of the head. The hand becomes very unsteady in its descent.

Co-ordination is not much, if at all, impaired. Electrical examination by the faradic current showed diminished reaction to stimulus of both nerve and muscle. When the electrode was applied to a muscle only those fibres immediately underlying it contracted.

The muscular system was throughout very reduced in size, but there was no special atrophy of any group of muscles.

The treatment adopted was the internal use of nux vomica and faradization of the muscles, which was most regularly carried out by Mr Mallam. This has been followed by a gradual improvement in all respects, although that has been retarded by insufficient food.

CASE III. was slighter in nature, and may be briefly summarized. M. A., æt. 39, married, temperate, began work in the "curing-house" in July of last year, and broke down in November. For a month he felt no bad effects. After that he began to suffer from gaseous (CS_2) eructations, vomiting, inability to retain his water for any length of time, severe frontal headache, dizziness, coldness and numbness of the extremities, feeling of great lassitude. On leaving his work he frequently felt, and often staggered on his way home, as if intoxicated. Sleep became restless, disturbed by horrible dreams, similar to those of the other two patients. His memory became somewhat impaired. For a time he took open-air exercise, in the hope of counteracting the evil effects of the exposure to the vapour, but was at length compelled to desist, from his increasing feebleness, and by severe pain over the base of the sacrum. He had also severe cramps in the legs during the night. There was complete impotence and loss of sexual desire. The special senses were not affected; and on examination the various forms of sensibility were not impaired. There was great diminution of the subcutaneous fat, and some decrease in size of the muscles, but no special atrophy. The galvanic and faradic reactions were diminished in amount, but there was no departure from the usual formula.

Compared with the other two, this case was very slight, and improvement under nux vomica and faradization was comparatively rapid. The faradization was at first applied to the upper extremities, which, within three weeks, regained almost their normal power. The increase in strength of grasp immediately after the application of the current was most marked, but this was only partially maintained till the next application. Similar treatment to the lower extremities was found to be similarly beneficial.

VII.—SHORT REPORT OF CASES TREATED IN WARDS X., XI., XII., AND OF OPERATIONS PERFORMED BY MR BELL, DELIVERED BY HIM TO HIS CLINICAL CLASS, WINTER SESSION 1883-84.

Reported by M. J. Gardiner, M.B., L.R.C.S.

Gentlemen,—Each session it is my custom on the last day of my course to briefly sum up to the members of my class the results of treatment of patients in Wards X., XI., XII., and to tell them the issue of the more important operations which they have seen me perform here.

During this session we have had under our care 320 patients; some of these have required hospital treatment for lengthened periods, others again have stayed but a few days. Of this number ten have died, six without any operation having been performed, four on whom we operated with the hope of preserving life.

Of the first six *two* died within three days of admission, their injuries forbidding hope from the first. The other four lingered for a little, but never gave much hope of recovery.

The generality of our cases has been such as is usually found in surgical wards, but I would draw your attention to the number of fractures of the skull which we have had. Seven such have been admitted, and all, with one exception, have recovered, the exception being that of a miner who has had many ups and downs, but has finally died from extensive abscesses of the left hemisphere. His case, with three of the others, you will find more particularly recorded elsewhere.

Of other fractures we have had the usual number, some 26 or so of both bones of the legs and five of the femur; these have all done well. Of operations, major and minor, we have had 135. Of these the chief are—four excisions of the elbow, all of which have done well; one excision of the knee at present in the wards, but soon going out; seven amputations of the thigh, six of which recovered, the death being in the case of a young man who was sent in here with acute disease of the knee, complicated by rapidly advancing phthisis; here we amputated, hoping that removal of the local irritation might enable failing powers to stem the pulmonary complication. Below the knee we have amputated six times, three being primaries for smashes; all have recovered. Syme's amputation has been done five times, one primary; all have recovered. Other fifteen amputations have been performed upon the upper limb, one at the shoulder joint has died. The amputation here was performed more with a view to alleviate suffering than with a hope to preserve life. The case was one of traumatic gangrene of the whole arm, with complete stripping of skin from the pectoral region and laceration of that over the scapula. Of other operations we have had one case of strangulated hernia, where strangulation had existed for four days, and in which death occurred from peritonitis in three days after operation, one median lithotomy with recovery, eight excisions of the breast with one death. The death in this case could not be related as cause and effect to the operation. The patient was a withered old woman, the tumour was small, the wound was perfect, and she died of bronchitis and emphysema, possibly having caught cold during the operation. Eighteen tumours were excised from other parts of the body.

The remaining operations have been performed chiefly to remedy deformity, hare lip, and such like, and to remove bone, carious or necrosed, or epithelial growths.

	No.	Recovered.	Died.
Excisions.			
Excision of Elbow,	4	4	0
" Knee,	1	1	0
Amputations.			
Thigh, 1 primary,	7	6	1
Below the Knee, 3 primary,	6	6	0
Syme's, 1 primary,	5	5	0
Upper Limb,	15	14	1
	38	36	2
Breast,	8	7	1
Other Tumours,	18	18	0
Lithotomy,	1	1	0
Hernia,	1	0	1
Total of Major Operations,	66	62	4

VIII.—THE DISCUSSION ON SO-CALLED "CATHETER" FEVER.

THE discussions on Catheter Fever that have recently taken place in London, Glasgow, and Edinburgh, may not perhaps add to the sum of our knowledge of the conditions liable to occur after catheterization, or other interference with the urethra and bladder; but they will, undoubtedly, have had the effect of bringing into greater prominence a subject not hitherto so widely known as its importance deserved and required. The thanks of the profession are certainly due to Sir A. Clark for the attention he has given the subject, and for the care and energy with which he has brought it before them.

The term "catheter fever" is a provisional one. It has been adopted by Sir Andrew Clark, the originator of the discussion, to indicate a constitutional disturbance or fever of a low, continued, or irregular remittent type, which, he says, may occur in apparently healthy individuals after catheterism, or other operations performed on the urinary passages, or after some traumatism inflicted on them. It sometimes ends in recovery, but more often in death, and neither during life nor after death is there evidence of structural lesion of the kidneys or any other organ adequate to account for death. It is not denied that a similar condition may (and, indeed, is more apt to) occur and be the cause of death in cases in which the kidneys are diseased; but the special point for which Sir Andrew Clark contends is that the fever may occur in persons free from renal disease.

The term is a new one in medical nomenclature. Is the condition itself new to medical literature? Sir Andrew Clark does not indicate that it is, but says, "the fact that this fever may arise in what seems to be good health, and, without the mediation of any visible structural lesion, issue in death, is not well known, or at least well known only to a few, and has, I repeat, no adequate place in English surgical literature, or in the English surgical teaching of the time." We may arrive at an opinion regarding the correctness or otherwise of this statement after a short consideration of the questions that have been asked and the answers that have been given during the course of the debate. What, then, is this condition of constitutional disturbance? Is it, or is it not, one of the unfortunate sequelæ of urethral instrumentation? If one of these sequelæ, can it be differentiated from those which have up to the present been observed and described? What is its nature? and what its prophylactic and remedial treatment?

First, then, is the fever due to the surgical interference with the urinary passages, or to the pre-existing lesion which called for that interference? Such a question leads us to inquire what the pre-existing lesion or lesions may have been. In the two cases described by Sir Andrew Clark in his London address (*Brit. Med. Journ.*, 1883, ii. p. 1221), these were enlarged prostate, and consequent difficulty in urination. There was no symptom before death indicative of kidney disease; and in the second case, at the post-mortem examination "nothing definite was found outside the bladder, and nothing in it sufficient to necessitate or account for death." These two cases having been given such prominence, and corresponding as they did with remarks made some weeks before at a meeting of the Clinical Society (*Brit. Med. Journ.*, 1883, ii. p. 773), seem to have occupied the minds of some of the speakers in the London debate to the exclusion of every other kind of case requiring urethral instrumentation. Yet Sir Andrew Clark appeared to indicate in his historical *résumé*, in his reply to Mr Berkeley Hill (*Lancet*, 1884, i. p. 137), and in the course of the Edinburgh debate, that a similar condition (or, at least, what he considered such) may occur after catheterization for stricture or other urinary lesion. He is accordingly of opinion that, as the urethral instrumentation is unvarying, while the lesions calling for it vary, and are of themselves inadequate to bring about such constitutional disturbance, the passage of the instrument is the chief factor in the production of the fever. His paper, he says, "was meant to call attention to a certain form of fever occurring after catheterization, without reference to the reason for catheterization." And, further, replying to the charge that his address tended to discourage from the use of the catheter, he says, "On the contrary, I think the reason why such evils, *not as I have been describing*, but many other evils that I enumerate in cases following catheterization, have existed, has been because the patient has been unwilling, owing, perhaps, to bad advice, to begin with catheter-assistance at once." Thus he recognises evils resulting because of the neglect to use the catheter at a sufficiently early period, but holds that they are distinct from the condition to which he gives the name of catheter fever. On the other hand, Sir Henry Thompson and Mr Berkeley Hill are inclined to ascribe the fever and its fatal issue to the lesions which called for the use of the catheter. The two cases described by Sir Andrew Clark are, they say, excellent examples of what they call the continuous form of urinary fever which is usually, and in cases of death always, associated with renal disease. Such cases of obstruction to the outflow of urine cause hypertrophy of the bladder-wall, which is followed by dilatation of the ureters and pelves of the kidneys, and then, in consequence of the backward pressure, by chronic interstitial nephritis. Mr Berkeley Hill makes the statement that Sir Andrew Clark's case is the first of the kind in which this nephritic condition has not been found. He, therefore, trusts that he "may be excused for maintaining that interstitial nephritis in the chronic form, or with the acute form superadded to it, is constantly found in kidneys where the low insidious form of 'catheter fever' is excited." Now, whether it be the first case or not, it may be noted that there was no dilatation of ureters or renal pelves, and that though renal disease was specially looked for in this and other cases it was not found; and when a competent observer tells us that he and others have not found what they carefully examined for, he is entitled to at least as much credence as he who always finds what he believes he ought to. Further, it is evident, as Sir Andrew Clark has pointed out in his Edinburgh address, that all cases of prostatic and vesical disease requiring treatment do not suffer from renal disease induced by the obstruction to the outflow of urine. In Marcus Beck's statistics, out of 66 cases that died under treatment, 26 have no mention made of renal mischief. It is, therefore, not improbable that such a fever as Sir Andrew Clark describes, may occur in persons whose urinary lesions are inadequate to account for its appearance, and that it may be lighted up by the passage of the instrument.

Granted, then, that it may be a result of the catherization, can it be differentiated from those sequelæ which have up to the present been observed and described? The answer to this depends, of course, on the view that is taken of the nature of the fever. Sir Andrew Clark asking the question, "What is its nature?" frankly admits that he does not know. He regards the condition as a clinical and not a pathological entity, and holds that it is one amongst the several varieties of constitutional troubles following operative interference with the urinary passages, which may be included under the term urinary or urethral fever. Nay, he would appear to go even further than this, for in his historical *résumé* he continually substitutes the term "catheter fever," where the authors themselves have said "urinary," or "urethral fever." As will be seen by a reference to the table published in last month's issue of this *Journal*, he divides the sequelæ of catheterization into two categories, according to the state of the kidneys before the surgical interference. In the first the kidneys are healthy, in the second they are diseased. In the latter, surgical interference will be more apt to light up serious consequences and to a greater extent than in the former; but in both the sequelæ will be of the nature either of a nervous disturbance or a toxæmia. On examining the table still further, we find that Sir Andrew Clark places his catheter fever exclusively in neither of these. The lesions he includes under the term catheter fever are—irritative fever, urinary arthropathy, and septicæmia. The two former, he considers, are of the nature of a nervous disturbance, the latter is a form of toxæmia. Opinions will probably differ as to whether the two former are correctly classed or not; but the points of importance are whether these can be considered distinct forms of urethral or urinary fever, and to which of them do the cases described by Sir Andrew Clark belong. The looseness with which the term urinary fever is employed makes it somewhat difficult to decide on the former point. With reference to the latter, it is evident that the cases to which Sir Andrew Clark draws attention are not of the nature of urinary arthropathy. Are they examples of a distinct constitutional disturbance of the irritative fever type, or are they cases of septicæmia?

Sir Henry Thompson and Mr Berkeley Hill agree with Sir Andrew Clark in considering his two cases examples of urinary fever; but there the agreement ends. For, holding, as they do, that they were due not to the catheterization but to the urinary troubles themselves, they consider that the fever to which he gives the name of catheter fever is really a kind of uræmia. Sir Henry Thompson has given a division of urinary fever into three forms:—(1), the acute transient attack; (2), the acute recurring form; (3), the continuous form which may be either chronic or sub-acute. Sir Andrew Clark's cases, he considers, belong to the third division; but as he, and with him Berkeley Hill, hold to the uræmic view, it is evident that their ideas regarding urinary fever differ considerably from those of Sir A. Clark. In one important clinical particular, however, it may be pointed out, the catheter fever cases differ from those which Sir Henry Thompson would group under his third form of urinary fever, and that is the temperature, which in catheter fever is always considerably above the normal, but in the continuous urinary fever is sometimes above and sometimes below. Mr Savory, who admits that unfortunate and even fatal results may occur after catheterization in subjects with healthy, as well as in those with diseased or degenerated kidneys, regards the cases to which Sir A. Clark referred as "cases in which constitutional disturbance, or fever, or pyrexia, are produced by local irritation through the nervous system." He also admits that catheterism may sometimes be followed by septic inoculation, but does not appear to consider that these cases may have been septicæmic. Mr Harrison, on the other hand, holds that the lesion in the cases was septicæmia, and that one of the important factors in its production was the withdrawal of too great a quantity of urine from bladders which were in a condition incapable of properly collapsing. Sir Joseph Fayrer does not attempt to classify the cases, but tacitly considers them examples of urethral fever, which term he prefers to "catheter" or "urinary" fever, because Clark's name refers only to one particular agent, and because the condition described "frequently has nothing whatever to do with urine at all, and much to do with the urethra." Malarious people, he believes, are more liable to it than others. The kidneys of those who suffer may be either healthy or diseased. The urethra may or may not be strictured. There may be no traumatism of it. And death may occur in cases where there is no interstitial nephritis. At the Glasgow discussion (*Glas. Med. Jour.*, March 1884) Dr H. Cameron indicated the same opinion as Harrison, that Clark's cases were septicæmic in their nature. He restricts the term urethral or urinary fever to "cases in which irritation of the urethra, sometimes by instruments, sometimes in other ways, leads by reflex influence, through the sympathetic nervous system, to attacks of a very sudden and sometimes alarming fever." He objects to the term "catheter fever" as applied to this condition. He never knew it to follow the passage of an instrument for the relief of a painful attack of retention. It occurs in cases of stricture after passage of an instrument, and is sometimes also met with after sounding for stone. Apart from the passage of instruments, it sometimes follows the expulsion of a urethral calculus, the passage of uric acid, and the passage of urine *per urethram* for the first time after a lithotomy. Macleod also objects to the term, and appears to consider Clark's cases as septicæmic. Few of the other speakers touched on the real question of the debate. At the Edinburgh meeting, Dr Watson opened the discussion with one of the most scholarly contributions that has yet been made to this subject. He points out that the condition described by Sir A. Clark may in some circumstances be slight and ephemeral, in others of a much graver character. It is not due to any severe injury to the urethra. It is not met with in cases of ruptured urethra with extravasation, or of ruptured bladder. It is therefore not due to absorption of urine (uræmia) nor to pyæmia. He would appear to doubt that it is septicæmic, as it may follow the use of an antiseptic instrument. It is not due to ague. He is "inclined to attribute it to irritation of the prostate, which causes reflex effects on a spinal centre, telling with most injurious effects upon the malpighian glomeruli, the capsules, and also the system of capillaries which pass along the tubules towards the radicles of the renal veins." This irritation of the prostate may be caused by a catheter, by a calculus, by a blood-clot, or by sand in the urine. As the initial lesion, then, is an irritation of the urethra or part of it, he prefers the term urethral to catheter fever. He holds that it may occur in cases in which the kidneys are healthy and in cases in which they are diseased; and, further, and here he comes very near to the views held by Thompson and Berkeley Hill, he believes that "where this condition of fever is set up as a result of the prostatic irritation, it is the pre-existence of serious structural disease, which is the turning point in the history of the case as to whether the patient shall get better or not." Dr Grainger Stewart has never seen anything in this fever that could be called uræmic, and is inclined to take the septicæmic view, but believes that there may be also an irritation of periphery of nerves set up. Mr Chiene and Dr Wyllie hold strongly to the view that Sir A. Clark's two patients died of septicæmia. Mr Chiene believes, however, that a patient may die from irritation of the urethra as Sir A. Clark has said. Mr Annandale believes in reflex irritation, local irritation, septic inoculation, and the sudden withdrawal of urine as causes of the fever. Mr Bell is inclined to regard a good many of the cases, Clark's included, that have been described as examples of this fever, as cases of septicæmia. But certain peculiar symptoms which cannot be explained in this way do occur after catheterization, and in healthy or apparently healthy people. These, he thinks, may be included in the condition referred to by Sir A. Clark. Dr Bramwell believes that in many of the cases there is a distinct uræmic element, and as regards the causation of death after introduction of a catheter, "that in some cases it is due to shock, in others to uræmia, but that in the great majority of those cases to which Sir A. Clark particularly alludes death is due to a combined condition of uræmia and septicæmia." Dr Duncan is of opinion that cases of death after catheterization may be brought within one of two categories—one neurotic, and the other inflammatory. The causes of inflammation are usually to be found in septicity, but there are cases that die of inflammatory fever, sometimes with suppression of urine. These latter are, however, rare in comparison with the septic cases. It is also possible, he thinks, that other forms of toxæmia may be lit up, which may lead to death.

The most favoured opinion would thus appear to be that Sir Andrew Clark's two cases probably died of septicæmia, a condition which some are inclined, but others are not, to class under the term Urethral Fever. Other evils are also liable to occur after catheterization. Some of them are more or less of the nature of shock. Others are febrile in character. But those which are of the nature of shock and those which are rather febrile do not appear to be well defined from each other. What one surgeon would ascribe to shock, another would consider fever. These evils are liable, just as septicæmia is, to occur in persons whose kidneys are healthy as well as in those whose kidneys are diseased. They may occur with such severity as to cause death; but in the large majority of fatal cases, it will be found that the kidneys are diseased or degenerated. In a small percentage, the fever may be so severe as to cause death even in cases where the kidneys have not been structurally affected in any way previous to the surgical interference. Are these febrile states to be considered examples of a distinct form of urethral fever? Is the fact that the issue of the fever may be fatal, even when renal disease cannot be detected, sufficient to entitle these cases to be classified apart from other cases of urethral fever which are not fatal? It does not appear that it is, and it must be remembered that the same condition may be lit up by other agents than the catheter, and be followed by the same results. Such then seem to be the issues of the debate. The condition to which Sir Andrew Clark has given the name Catheter Fever cannot, in our present state of knowledge, be differentiated from that known as Urethral Fever. In giving up the name, Sir Andrew Clark has conceded this point. And in coming north, it would appear that he has gained some enlightenment which he failed to obtain in the city of "light and leading," and has discovered that his so-called catheter fever has had its place for many years in surgical teaching in Scotland, though it may not have been considered a distinct entity worthy of a distinct position and name.

The prophylactic treatment of this Urethral (or, if the term is preferred, Catheter) Fever will be best carried out by avoiding the causes of irritation and of septic infection, and by studying in each patient what Mr Bell in the course of the debate called the "personal equation." What is it that makes one individual prone to evils after catheterization, while another will suffer not even a temporary inconvenience? Renal disease is, undoubtedly, one factor; stricture is another, and so also is malaria. But these are not the only ones. A great deal has been said about the introduction of air into the bladder; yet we find a sufferer writing in a recent number of the *Lancet* that this is by no means an infrequent occurrence when he passes the catheter or washes out his bladder, but it has never caused him the slightest inconvenience. Nor is this by any means a unique case. Old country practitioners may also be able to bring to remembrance instances in which instruments, that would now be called "dirty catheters," have for years been passed regularly three or four times a day by patients themselves in out-of-the-way corners as well as in their own rooms, without a single bad symptom occurring. Septic infection is, undoubtedly, liable to be caused in either of these ways; but there are cases in which it would almost seem to be courted and yet it does not occur. There is probably something, it may be in the local condition, or in the constitution, the temperament, the state of health, which cannot perhaps be clearly defined, but which makes one individual more prone than his neighbours to evils resulting from urethral irritation or introduction of septic matter into the bladder. Such conditions must be avoided. Every patient who is about to enter on "catheter life," to undergo a course of treatment for stricture, or even to be sounded for stone, ought to be prepared as if he were about to undergo a serious operation. It is evident, of course, that this preparation cannot be carried out in the case of an attack of painful retention. This is an emergency and must be treated as such. But, fortunately, it does not appear that the passage of an instrument to relieve such a condition is liable to be followed by urethral fever. Mr Annandale's fear of an unknown urethra in such cases is exaggerated, and his recommendation to aspirate the bladder is hardly necessary, nor will it always be found practicable. The tendency to urethral irritation will be diminished or avoided by the administration of quinine, of opiates, unless these are otherwise contraindicated, of bromide of potassium, and, if necessary, of chloroform. Where it is admissible a soft instrument should be used rather than a silver one. To guard against the risk of septic infection all instruments used should have been previously rendered aseptic. Dr A. O. Ward's catheters, with the cul-de-sac behind the eye closed up to prevent foreign material resting in it, are a step in the right direction. Mr Harrison's method of injecting a small quantity of a weak antiseptic fluid will do much to counteract the evils that are liable to follow the sudden withdrawal of a large quantity of urine from bladders that are wanting in tone. When the fever does occur, the best form of remedial treatment will probably be found to be that indicated by Dr Watson, namely, the perchloride of iron internally, with vapour or hot lamp baths where the skin can be got to act. Sir Andrew Clark's experience is that quinine is of no value as a remedial agent in this fever.

Part Second.

REVIEWS.

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San Remo, Climatically and Medically Considered. By ARTHUR HILL HASSALL, M.D., Lond., etc. With numerous Illustrations. New Edition. London: Longmans, Green, & Co.: 1883.

Wiesen as a Health Resort in Early Phthisis, with Directions for Clothing, Diet, and Exercise in the Swiss Alps during Winter. By A. T. TUCKER WISE, M.D., etc. London: Baillière, Tindall, & Cox: 1883.

Royat (Les Bains), in Auvergne: Its Mineral Waters and Climate. By G. H. BRANDT, M.D. Second Edition. London: H. K. Lewis: 1883.

Hammam-Rirha, Algiers: A Winter Health Resort and Mineral Water Cure Combined. By G. H. BRANDT, M.D. London: H. K. Lewis: 1883.

THE first of the works on our list is by far the most comprehensive, comprising as it does notes of some ninety-six mineral water stations and eleven winter resorts. It opens with a study of mineral waters generally, their origin, temperature, chemical constitutions, physiological and therapeutical actions, and the modes of administration. The classification adopted is that of Dr Durand-Fardel, who "long ago pointed out that mineral waters, which are grouped together by the community of one predominating principle, possess at the same time identical therapeutical properties." In this way five groups, with a supplementary one, have been formed, the *sulphuretted, chlorinated, bicarbonated, sulphated*, and *indeterminate*, the supplementary including the *ferruginous* waters. These groups may be again subdivided, according to the base, as soda, lime, etc., which may be present. The indeterminate waters are two, those which are simply *thermal*, and those which are *feebly mineralised*, but possess special properties. The modes of administration described are the bath, the buvette, douche, inhalation, pulverisation, and mud-bath. The individual stations are shortly described in their geographical order, commencing with those in the central division of France. Seventy-one, or nearly three-fourths of the springs, are situated in it, and the two following divisions, the Pyrenean, and southern, including Corsica. The eastern division and Savoy claim nineteen, the northern division four, and the western two. Royat, Mont-Dore, La Bourboule, Vichy, Eaux-Bonnes, and Contrexéville receive a greater share of attention than the others, their popularity probably admitting of more extensive observation and examination. The notes regarding the winter resorts are somewhat meagre; but this is the less to be regretted, as they are all well known, and full information may be had regarding them elsewhere. The work concludes with some capital advice to invalids going to the mineral stations or winter resorts. Three weeks are recommended as the time to stay at a mineral station, but the patient is strongly urged not to rush home to business at once—a week's rest at some quiet place on the way being considered advantageous, and in some cases indispensable. The work is full of very valuable information, and will prove of great assistance to the practitioner in helping him to decide where he may best send his patient.

Dr Hill Hassall's book is to all intents and purposes a second edition of a former work on "San Remo and the Western Riviera." The geographical features of the town and immediate neighbourhood, the history, and the characteristics of the people are gone into, at much greater detail, making the earlier chapters a very complete guide-book. The aid of various scientists has been obtained in describing the general climatic features and the natural history of the district, which are also discussed at great length. The last chapter is the most important. It deals with the medical characteristics of the climate, and its suitability, or otherwise, for different forms of disease. From his own and other observations, Dr Hassall comes to the conclusion that the climate is moderately warm during the winter, even in the shade, that it is very sunny, that the sky is bright, the light abundant, the air clear, moderately dry, refreshing and exhilarating, being kept in pretty constant movement by the sea and land breezes. He is further of opinion that the combined effect of these several characteristics is to make the climate during the winter moderately stimulant, and decidedly tonic, with "a very powerful effect on the functions of the body, for good or evil, in a great variety of diseases." Its drawbacks are the winds, more particularly the mistral or north-west wind, which is so troublesome at Cannes and Hyères. The diseases which seem to be benefited by residence at San Remo include chronic rheumatism and gout, (acute articular rheumatism, on the other hand, is not uncommon in the Riviera), scrofula, certain cases of chronic degenerative disease of the nervous system, degenerative diseases of the heart, obesity, some atrophic diseases, certain cases of phthisis, bronchitis, atonic dyspepsia, and chronic renal disease. Cases which do not suit the climate are excitable gouty patients, people who suffer from certain diseases of the brain, hyperæmia, apoplexy, paralysis, etc. Epilepsy and functional disorders of the nature of hysteria, neuralgia, and insomnia, seem to be made worse. Valvular heart disease is not uncommon among the natives. Quinsy is very common. Diarrhœa and constipation are both liable to attack new-comers, and altogether statistics would seem to show that chronic gastric and hepatic affections (with the exception of atonic dyspepsia), do not do well at the Riviera. The cases of phthisis which derive benefit are:—(1.) Those in whom there is a general delicacy or hereditary tendency to phthisis without actual development; (2.) Those in whom the disease is at an early stage, consolidation without softening; (3.) Cases in which the disease and softening is limited to the upper part of one lung; (4.) Cases in which the disease affects both apices; (5.) Cases in which the disease, though extensive, has progressed slowly without high temperature; (6.) Chronic cases; (7.) Stationary cases; (8.) Most cases in which the patients are past the meridian of life. Hæmoptysis and a certain amount of laryngeal complication do not contra-indicate residence in San Remo. The cases which Dr Hassall recommends should be sent, seem to us to be cases which no one would, in his senses, think of sending anywhere. They are patients with advanced and rapidly progressing disease, accompanied by high temperature and wasting, or by secondary complications, as diarrhœa and ulceration of the intestinal mucous membrane. If benefit is to be derived from residence at this health resort, invalids will find it necessary to avoid exposure to the direct rays of the sun, to beware of sudden changes of temperature, as in passing from the sun into the shade, and to wear warm clothing. These, and other precautions to be observed, are clearly and emphatically laid down by Dr Hassall, and it might be well for invalids themselves to study this part of his work with some care. The dangers of leaving too soon are also pointed out. The book forms altogether a very complete medical guide to San Remo, and might be put with advantage into the hands of sensible invalids, who are ordered there for their health. On the other hand, the constant reference in the last chapter to various diseases might make it somewhat of a mixed benefit to those of a hypochondriacal or despondent turn of mind.

Dr Wise's brochure on Wiesen as a health resort takes us from sea-shore to Alpine valley. Wiesen is situated in the Grisons Canton, about twenty-four miles distant from Chûr (Coire), and eleven miles from the now famous "high altitude resort" Davos-am-Platz. It lies at a somewhat lower level (nearly 300 feet) than the latter place, being 4771 feet above the sea, by General Dufour's measurements. The climate is, as might be expected, very similar,—"cold, bracing, and stimulating." The temperature is slightly higher and more equable, and there is less wind. The winter is shorter. Snow falls later, and melts earlier and more rapidly than in Davos. It has thus many recommendations as a health resort for such cases as do well with the "high altitude cure." Dr Wise's work is not so complete a guide to it as we would like to see, and in that respect contrasts unfavourably with Dr Hassall's book on "San Remo." But, if the geographical, biological, and historical details are meagre, there can be no complaint about the amount of advice regarding clothing, diet, exercise, meals, sleep, etc. We regret to notice in the preface the statement, that "the chapter on personal hygienic management is written for those who are not so ill as to require constant medical supervision, and who visit the mountains for the air, and not for physic. Should bad symptoms arise, they can always consult a doctor without paying the usual ten or twelve pounds for the 'season,' and swallowing numerous bottles of medicine in addition." Such a statement may have effects very different from what Dr Wise may have intended. The patients who do not require "constant medical supervision" are just the cases that do best. But, if they don't require the doctor's constant care, they certainly need his guidance. Our own experience at Davos was that more than one of the cases which did badly, and were classed as failures, went wrong because of their own carelessness and neglect. People who soon become acclimatised think themselves too well to have the doctor, and are betrayed into doing what is often highly imprudent. The hints as to payment of fees and swallowing of medicines do not correspond with what we knew of Davos some two or three winters ago. There was certainly no swallowing of medicines in the case of patients who were able to take ordinary out-door exercise and attend the table d'hôte. It was very seldom even that it was ordered for those who might be temporarily confined to their rooms. But if the doctor did not prescribe medicines, he looked carefully to the dieting and exercise of his patient, and gave each individual guidance as to the mode of life that would suit him best. It would be an unpardonable mistake to send any patient to a health resort, more particularly in the Swiss mountains, and give him to understand that if he were only there he might do pretty much as he pleased, without seeing one of the local doctors. He might as well have a bottle of medicine without the "Signetur." With this caveat, we can heartily recommend Dr Wise's book. Our own recollections of Davos and Wiesen are very pleasant, and we are glad to see that Wiesen and other stations, such as St Moritz, Samaden, and Andermatt, are being opened up to relieve the crowding which now prevails at Davos.

Dr Brandt's work on Royat brings us back to the centre of France. This book has been previously noticed at length in our pages. To the present edition are added the clinical notes of nine typical cases which have been treated with success at the springs. These include three cases of eczema, gouty or arthritic, one of the gouty psoriasis palmaris (in which the skin of the body had been darkened to such an extent by the use of chrysophanic acid as to destroy the underclothing), one of acne rosacea with nasal obstruction, one of gouty dyspnœa, one of bronchitic asthma, and two of diabetes mellitus. One of the latter cases was a lady, æt. 58, with profound anæmia, debility, dyspepsia, and albuminuria. She improved so remarkably that she went by the name of "*La Ressuscitée.*" The work contains a great deal of information in small compass, and should be obtained by any one desirous of paying a visit to these springs.

The same author, in the next and last work on our list, deals with Hammam-Rirha, a health resort in North Africa, to which attention has already been drawn by Dr Lauder Brunton in the *Practitioner*, and by Mr G. D. Pollock in the *Lancet.* It lies about sixty miles south-west of Algiers, and fifteen from the sea-shore. Roman baths, and the remains of the town of Aquæ Calidæ, have been discovered in the vicinity. It possesses in addition to an excellent climate "a chalybeate spring for drinking purposes, warm saline springs for baths, and is surrounded by lovely scenery." The composition of the hot springs is very similar to that of the waters at Bath and at Baden in Austria. They have been found of great benefit in the various manifestations of chronic rheumatism and gout, in diseases of bone, as periostitis, caries, and badly consolidated fractures. In cases of old gun-shot wounds also they have been of much service (the French Government having selected Hammam-Rirha as a sanatarium for the army). Cases of obstructed lymphatics, varicose veins, chorea, and syphilitic cutaneous affections have yielded to the therapeutic application of the baths. The chalybeate spring contains carbonate of iron (in too small quantity to render the taste disagreeable), free carbonic acid, and some salts. It makes a pleasant effervescing table water. It has proved useful in cases of constipation, in anæmia and chlorosis, in dyspepsia and chronic hepatitis; while its slight diuretic action may render it useful in cases of renal calculus. These baths and spring, along with the warm winter climate, make Hammam-Rirha a place to which invalids can resort in winter, when the season for European baths is over. In addition to chronic rheumatic, phthisical patients may also derive benefit from a sojourn there. It seems to be useful in cases of a lymphatic or strumous diathesis, or where dyspeptic complications are present; but where the temperature is high, it does more harm than good. There are pleasant walks and excursions to be had among the hills and pine forest, where also sport is to be obtained by those who care for it. A fine new hotel is being built for the accommodation of English and other visitors. Dr Brandt, while continuing to reside at Royat during summer, has determined to settle at Hammam-Rirha permanently during the winter, an arrangement which will be of advantage to the English-speaking invalid. An excellent little map, showing the routes, accompanies the volume.

The Mineral Waters of Aix-les-Bains and Marlioz: Practical Considerations on their Action and Application. By Leon Blanc, M.D., Knight of the Crown of Italy, etc., etc. London: J. & A. Churchill: 1883.

This little work gives an excellent description of these waters, and also of the diseases for which they are suitable as therapeutic agents. We have much pleasure in commending it to the favourable consideration of our readers.

The Compend of Anatomy, for use in the Dissecting-Room and in preparing for Examinations. By J. B. ROBERTS, A.M., M.D., Lecturer on Anatomy in the Philadelphia School of Anatomy, etc. Third Edition. Henry Kimpton, 1884.

THIS work, of about 200 pages, is a condensed Gray, and is intended as a cram. The fact that it has reached a third edition would seem to imply that it is popular with a certain class of students. On the whole it is about as accurate as such works usually are, and although the third edition is said to be revised, we have failed to find any indications that the author is familiar with any of the recent contributions to human anatomy. A work giving a brief summary of the most important facts in anatomy we can easily understand to be useful to a student just before his examination, but this one does not help the student much to distinguish the essential from the non-essential facts. Thus we find a table giving the centres of ossification and their time of appearance in all the cranial bones, and also in the carpus and tarsus. The student who requires the use of a book of this kind might employ his time more profitably than in cramming up facts of which his examiner will probably be somewhat dubious.

The Dissector's Manual. By W. BRUCE CLARKE, M.A., M.B., F.R.C.S., and C. B. LOCKWOOD, F.R.C.S. Cassell & Co., 1883.

THIS manual is intended as a guide to the student in his practical work in the dissecting-room. It contains an account of the procedure necessary in order to expose the different structures in the body, but the student is referred for a description of the structures themselves to a systematic work. To the ordinary student such an arrangement is a very inconvenient one, as such systematic works as Quain and Gray are neither very portable, nor are they arranged conveniently for the student to read up his dissected parts from. The usual method adopted in works on practical anatomy, such as Ellis, Heath, or Holden, of combining directions for dissecting with a description of the parts exposed, is much better adapted to the wants of the student. The directions for dissecting given in this work are on the whole good, but we were rather surprised at the plan recommended for rendering the abdominal walls tense, viz., distending the peritoneal cavity by means of an ordinary blowpipe. The authors mention, however, that in some dissecting-rooms bellows are kept for this purpose.

The account of the dissection of the brain might be considerably improved, the directions for finding the fissures and convolutions being especially indefinite and defective. The authors seem to have peculiar ideas regarding the foramen of Majendie. We were under the impression that it was an aperture in the pia mater, at the lower part of the posterior wall of the fourth ventricle, by means of which the cavity of the ventricle communicated with the subarachnoid space. We learn, however, that the opening is an artificial one, owing to the arachnoid and a layer of gray matter being torn through. In a diagram of the floor of the fourth ventricle there are at least half a dozen mistakes. In another diagram, showing the position of the kidneys and spleen as seen from behind, the latter is represented as lying entirely external to the kidney, with its long axis vertical, and extending from the seventh rib downwards below the twelfth. This work will require numerous alterations and improvements before it can compete with the text-books now in use, and in its present form it appears to us to be an unnecessary addition to anatomical literature.

Illustrated Medicine and Surgery. First and Second Parts for 1883. New York: E. B. Treat.

THESE two numbers are quite up to the standard of this most valuable periodical, the illustrations being, as usual, beautifully drawn and coloured. The first plate shows a series of sections of teeth in a kitten, demonstrating their development. They are contributed by Dr W. Hailes, junior, Professor of Histology and Pathological Anatomy in Albany Medical College. He promises a series of similar plates and demonstrations of embryology.

Dr Johnson Eliot reports a case of sarcoma of the palato-pharyngeal region removed by the knife (through the mouth) without much bleeding. Patient, however, died of a sudden hæmorrhage some four months afterwards. There had been a slight return of the tumour in the cicatrix.

Dr James Little, Professor of Clinical Surgery, New York, gives photographs of three cases of complicated harelip in youths aged 9, 18, and 21 years. The photographs show the conditions both before and after the operations. The results demonstrated are most satisfactory. One of the patients had a curious malformation of the right hand (also represented), viz., the absence of the ring finger with its metacarpal bone.

Dr J. H. Pooley contributes a paper on two cases of malformation of the hand, with several illustrations.

An apparatus for the treatment of fracture of the patella on the continuous extension principle is described and illustrated by Dr J. S. Wight, Professor of Clinical Surgery in Long Island College Hospital. The method seems to be a very excellent one. A large piece of plaster is applied above the upper fragment, and straps are attached to either side and over pulleys at the foot of the bed; the foot is at the same time elevated.

In the second part is a beautiful delineation of an enormous enchondroma of the humerus. Patient was 32 years old. Tumour was first noticed when he was 9 months old. Size—circumference 38½ inches, length 30½ inches. Tumour does not seem to have been removed. It gave no pain, but there were frequent hæmorrhages. Case reported by Dr W. W. Dawson, Professor of Surgery, Medical College of Ohio.

Dr Henry G. Piffard of New York contributes an account of a case of "Trichophytosis Barbæ," illustrated by an excellent coloured photograph of the patient.

Six cases of rupture of the choroid are reported by Dr Thomas R. Pooley of New York, with four illustrations of some of the ophthalmoscopic appearances. One of the last papers is on "Multiple Sarcoma of the Skin," by Dr Franklin Townsend, Professor of Physiology in the Albany Medical College. There are two excellent plates illustrating this very rare affection.

We have much pleasure in recommending these numbers as worthy to occupy a place on the table especially of surgeons, who will thus be supplied with drawings of rare affections and operations.

Text-Book of the Principles of Physics. By ALFRED DANIELL, M.A., Lecturer on Physics in the School of Medicine, Edinburgh. London: Macmillan & Co.

THE author of this work informs us that it was primarily designed as a contribution to medical education, but, while it possesses this valuable character, its scope and aim seem sufficiently comprehensive to render it equally valuable to the non-medical and to the medical reader. In his preface, the author directs attention to the arrangement which prevails in some Universities of allowing students to take their doctorate in medicine with a very slight and imperfect knowledge of physics. It certainly seems somewhat of an anomaly that such should be the case—that the study of natural philosophy, the proper basis of physiology and pathology, should be relegated to comparative obscurity, while the student is overwhelmed in the attempt to remember, for pure examination purposes only, a series of disconnected facts in botanical and zoological science, which afford him little assistance either in the study or the practice of his profession. If the appearance of this book will in any way assist in hastening the day when natural philosophy will rank at least equally with botany and natural history in the medical curriculum, the author will have deserved well of the profession.

The volume possesses numerous qualities which ought to recommend it to practitioners of medicine. While it is a complete manual of natural philosophy, the physics of the human frame are constantly kept in view, and apt use is made throughout of physiological illustrations. Particularly instructive and interesting to the medical reader are the chapters on liquids, on sound, and on ether waves. The former embraces a scientific account of such matters as imbibition, diffusion, osmosis, and streams, while the two latter are illustrated by a consideration of the physics of the ear and larynx, and the eye. Of no less interest, and of great practical value, are the pages devoted to the pressure of the atmosphere. The author appears to have committed a slight error in attributing the stromuhr to Vierordts. We believe the credit of inventing this instrument, in its present form, belongs to Ludwig and Dogiel. The concluding chapter of the book is devoted to electricity and magnetism. These are discussed in a comprehensive and intelligent manner, and form one of the most valuable divisions of an otherwise able and valuable treatise.

Altogether, this volume supplies a distinct want in scientific literature, and from the point of view of the profession it is so interesting that it merits a place in the library of every medical practitioner and student. By its careful study those who already know something of the laws of natural philosophy are bound to have their knowledge supplemented and brought up to date, and those to whom physics is a comparatively unknown territory will find those laws presented to them in a concise and intelligible manner, and with an animation and energy unusual in scientific text-books.

The book is well got up, and is supplemented by an exhaustive bibliography, and by carefully prepared indices. Its appearance is alike creditable to the author and the publishers, and we heartily wish it the success which it so justly merits.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIII.—MEETING V.

Wednesday, 5th March 1884.—Dr LITTLEJOHN, *President, in the Chair.*

I. EXHIBITION OF PATHOLOGICAL SPECIMENS.

1. *Mr A. G. Miller* exhibited (*a*) an ENLARGED BURSA PATELLÆ, and (*b*) a CAST OF THE KNEE taken in plaster and varnished with paraffin to show the appearance before the removal of the bursa. The specimen was interesting not so much from its rarity, as from the peculiar shape of the tumour which was removed. It presented a conical outline above the patella. It was very firm, almost car-

tilaginous in hardness, and on removal was found to be a very much thickened bursa filled with fibrous material. It appeared to be almost solid. There were also present in it a few of melon-seed like bodies.

II. Exhibition of Instruments.

1. *Dr Roderick Maclaren* of Carlisle showed (*a*) a DRILL. He did not claim any originality for it; but it was an instrument which he had never seen in any surgical instrument-maker's stock, and he thought it might be of use to surgeons, more particularly in removing portions of the lower jaw. (*b*) A BONE-CUTTER worked by screw power. The ordinary bone-pliers were often deficient in power and required the exercise of a great deal of strength on the part of the surgeon. It had occurred to him that screw power might be utilised for this purpose, and he had got an instrument made by a local engineer, by which the bone was cut between a fixed blade and a chisel driven by a screw.

III. Original Communications.

1. *Dr Roderick Maclaren* read his paper on FIVE CASES OF AMPUTATION AT THE HIP-JOINT, which appears at page 992 of this Journal.

The President said he was certain the Society felt much indebted to Dr Maclaren for reading before them his interesting paper, and for coming such a distance to give the details of these valuable cases.

Prof. Annandale said the first remark he would like to make was regarding the disease for which this operation by Furneaux Jordan's method was most frequently done. By far the larger number of the cases on the list Dr Maclaren had drawn up were cases of hip-disease. This impressed him still more with what he had already brought before the Society on more than one occasion, viz., the importance of early diagnosing cases of hip-disease in which there is suppuration and disease in the head or neck of the bone. In his experience, if excision was early performed in such cases, it prevented extension of the disease to the acetabulum and pelvis, where, as a rule in most cases, the disease was secondary. It so happened that on several occasions in making an exploratory incision he had found the disease very limited, sometimes affecting the trochanter alone, sometimes a necrosis of the neck of the femur. By removing this disease the result had been most satisfactory. The patient, where such had been done, would recover with a limb shortened, but with a freely movable joint. The second remark he would make was that all surgeons were agreed that this method of amputating must be considered as a much safer method and attended with less risk than the ordinary hip-joint amputation. All who had experience of it must have found that shock was much less than in the ordinary amputation. There was one little hint he had learned in practising this operation, and that was, that instead of first making the circular and the perpendicular incision, and afterwards disarticulating, it was more advantageous to saw through the bone at the situation of the circular incision, and then to dissect it out and disarticulate. He believed this had been suggested by some one, but he did not know of it till he had practised it for himself. Another modification of the hip-joint amputation had recently occurred to him. They were all agreed that the prime risk of such an amputation was shock from removing such a large portion of the body, and it might be also from bleeding, if precautions were not taken to prevent that. The point that had often struck him in connexion with shock from such an amputation was that they opened into a large joint. He had also found in the after treatment of his cases that the cavity of the acetabulum had been a difficulty as regards drainage. Fluids, blood, serum, or pus had sometimes accumulated there, and it had not been easy to drain them. It had struck him that in some cases where it was not necessary to disarticulate, they might perform an operation which might carry out all the principles of amputating at the hip-joint. Take, for instance, the case which led him to think of this, a tumour originating in the soft textures of the thigh, passing up and over-lapping the hip-joint. Amputation according to the ordinary method would have been impossible. It could only have been done by dissecting up a skin flap and performing disarticulation. This was a case in which it was not absolutely necessary to disarticulate, the bone not having been originally affected. It occurred to him that it would be sufficient if a subcutaneous section of the femur, immediately below the trochanter, after Adam's method, were first done, the soft parts afterwards divided, and the limb removed. He thought this method might be applicable in certain cases of injury. His last observation would be in regard to the arrest of hæmorrhage. He had not been successful in the use of Davy's lever. That might be due to his own clumsiness. He preferred the abdominal tourniquet, but he should be inclined to try first Esmarch's method.

Mr John Duncan supposed it was some ten or fifteen years ago, when he was assistant-surgeon and in charge of Mr Spence's wards, that a case was brought in requiring amputation at the hip-joint. In amputating he used the abdominal tourniquet. Notwithstanding, a considerable amount of blood was lost at the operation, and the patient was in the most imminent danger of life from embarrassment of respiration produced by the tourniquet. He determined to do his next case in a different way. Very shortly afterwards another patient was brought in requiring a similar amputation. This was performed by the method described that evening, and the hæmorrhage controlled (as had also been described) by an Esmarch's band round the groin, kept in place by bandages.

The circular incision was first made, the bone sawn through, the bloodvessels tied, and the head of the bone disarticulated by the perpendicular incision. A hip could be amputated in that way without Davy's lever and without abdominal tourniquet, and not a drop of blood lost. He thought he had made a good discovery of a new method of amputation. Besides the saving of blood he thought it might be useful in other ways,—for example, rendering the chances of keeping the wound aseptic greater, by being further from the anus. He thought of publishing the method, but on looking up the literature he found it was no new thing, but an old operation described by Dupuytren. He had no doubt it had not come into general use because the rapidity of the flap operation made it the favourite in the pre-chloroform days, when rapidity was so essential.

Mr Joseph Bell said he thought that Dr Maclaren must be gratified to find that the consensus of surgeons was that Furneaux Jordan's method of amputation was the safest and best. He was very much pleased with the clear and brief manner in which the cases that had been brought before them were detailed. It so happened that he once talked over this operation with a greater than Dupuytren, their old master Syme, who told him that this method, now known as Jordan's, was the method which ought to be adopted, and he would do it the first time he got a chance. He never got a chance. He had strong objections to the abdominal tourniquet, and prophesied that surgeons would soon be doing the operation in the way that had been described. He (Mr Bell) did not think that it could be done in many primary cases. Mr Annandale's plan for amputating subcutaneously was very ingenious and might be useful, but he thought there were but few cases where it would prove applicable.

Dr Bramwell thought that a very interesting point in one of the cases was the disappearance of the waxy degeneration. He had not seen a case in which this had undoubtedly occurred, but there was no reason why a patient with waxy disease might not get perfectly well. Dr Maclaren's case differed from any he had ever heard of, inasmuch as the waxy disease, as evidenced by the enlarged liver, albuminuria, and diarrhœa, disappeared when the suppurative process was still going on. This could but rarely occur, and was a point worth noticing.

Mr A. G. Miller would like to make a remark on two points. His experience was of one operation done in the manner described by Mr Duncan and Mr Annandale, first, a rapid circular incision and division of the bone by the saw, followed by arrest of hæmorrhage and disarticulation of the head of the bone through the perpendicular incision. The patient, a boy, lost scarcely any blood, the common femoral having been compressed by Dr P. H. MacLaren. No clamp, lever, or tourniquet of any kind was employed. With regard to sawing the bone through before disarticulating, he was not inclined to agree with Mr Annandale, though it might seem presumptuous of him to say so, that this mode of procedure was an advantage. In his case he experienced considerable difficulty in disarticulating from the want of leverage. He was anxious not to leave periosteum, as he thought it might be leaving a nidus for disease. It was very difficult to remove the loose periosteum without the leverage to help him. The boy came back with a slight reproduction of caries in new bone, which had grown from a little periosteum he had left. There was no doubt about this, because the bone had the peculiar character of periosteal bone, being in little nodules The operation was done for advanced hip-disease. There was great deterioration of the bone, the cancellous bone being oily, and the laminated almost a mere shell.

Dr Heron Watson rose at that late period of the discussion rather for the purpose of adding his voice to the general consensus of opinion regarding the admirable paper which had been read before them. The previous speakers had left but little to say on the subject, but there were one or two points on which he should like to add a few words. Long before he was aware of any description of the method of amputation now known as Furneaux Jordan's, it was brought under his notice by a case in which, during operation for excision of the hip, the too energetic assistant thrust the bone out from the periosteum. Amputation was at once performed by a circular incision at the lower end of the perpendicular wound. In another case where there was penetrating disease of the acetabulum, as well as other disease, a straight incision was made in the line of the shaft of the femur to about half-way down the thigh, and the head of the bone being turned out, the soft parts were cut through circularly. Had those cases been published at the time, he had no doubt they would have been regarded as an innovation in surgery; but he observed that the same operation had been described not only by Dupuytren, but by an earlier surgeon, Ravaton, in 1743, and it was not improbable, that if the records of surgery were searched, it would be found that it had been practised at a still earlier date. As to the mode of procedure, he was in favour of making the perpendicular incision first, then turning out the head of the bone and making the circular incision. In this way hæmorrhage might be readily prevented without the use of abdominal tourniquet or other methods of compressing the aorta or common iliac. What ought to be done when, after excision or amputation, an abscess within the pelvis with a small aperture through the acetabulum was found? These cases were not so rare as had been said. He suspected that in many cases the disease commenced in the acetabulum and not in the head of the femur. That was not an unlikely spot for disease when they remembered that it was more exposed as a tripartite centre of growth to the chance of those trivial injuries that lit up disease than was even the head of the bone. Gouging out the affected part of the acetabulum was not sufficient. Sawing the entero-acetabulum out was better. It was better still, where the internal abscess was large, in addition to the cutting out of the acetabulum, to make an incision down upon the ramus of the ischium, and pushing a pair of dressing forceps up along the line of the bone into the abscess sac, establish a distinct drainage-hole to allow of the operation wound healing. With reference to Dr Bramwell's remark regarding the disappearance of waxy disease while suppuration was going on, he could give his testimony that such things did occur. He was of opinion, however, that in many of the cases, the waxy disease was due more to the too diligent administration of alcoholic stimulants by the friends than to the long-continuance of suppuration.

Dr Maclaren thanked the Society for the patience with which it had listened to his paper, and especially those members who had made remarks upon it. It had been a great pleasure to him to have raised and listened to such a discussion. He had not attempted to lay claim to any originality in the paper, and he found he had brought before them no new thing. The operation, he had learned, dated back to the early part of the 18th century at least. With the remarks of Mr Annandale on excision he was very pleased to be able to agree. It was a matter of consequence to do the operation at an early period. His first cases were very unsuccessful. For a time he gave up the operation; but thorough drainage of the acetabulum and division of the bone *in situ* had this result—that of his last four cases two were now healed and well, the other two steadily progressing to recovery. From the remarks made by different speakers he observed that he had omitted reference in his paper to shock. He should have stated that there was a remarkable absence of shock, a very different thing from what was seen after a flap operation. As to division of the bone and removal of the head, it seemed to him that the extra time it required was an objection to it. In one of his cases, the second, he did divide the bone at the upper third, then, finding the portion left affected, he removed it. It did not give him much trouble, but he could readily conceive of it doing so, and it certainly caused much delay. As to Davy's lever, it was easier to apply on the left side than on the right. The subcutaneous method of Mr Annandale was ingenious, but he fancied there were not many cases in which it could be done. The origin of the disease, his own experience led him to believe, was more often found in the head of the femur than in the acetabulum. As to Dr Watson's point about the waxy disease, he was inclined to accept it as true. The patient in whom it occurred was the pet of an incurable's home, and probably had been fully supplied with wine and delicacies of a like nature.

2. *Mr John Duncan* read his paper on WOUND TREATMENT WITHOUT THE SPRAY, which appeared at page 892 of the April number of this Journal.

The President asked Mr Duncan what was the strength of the preparation of carbolic acid and glycerine he used, and whether he had seen symptoms of carbolic acid poisoning from its use?

Mr Duncan replied that he used the preparation in two strengths, 1 to 20, and 1 to 12: 1 to 4 might, however, be used without causing irritation. He had not observed symptoms of poisoning.

Mr Joseph Bell said that Mr Duncan's papers for the last three years had been gradually converting him to his (Mr Duncan's) views. He had now almost altogether given up the spray. There were a few special cases in which, possibly from some superstitious notions, he retained it still. The bichloride solution, he thought, caused less serous discharge than the preparation of carbolic acid and glycerine, but his experience of either had not been very considerable as yet. Their results without the spray for the last few months had certainly not been worse than before. There had been no preventible mortality. As the Society was aware, he published his hospital results every six months. It might be interesting to compare those in which the spray had played no part with those previously published. In the course of another twelvemonth there would be very few spray-engines left.

Prof. Annandale said he should like that the Society and the profession thank Mr Duncan for the work he was doing in connexion with antiseptic surgery. There were few surgeons who did not practise antiseptic surgery in some form or other. Great credit was due to Mr Duncan for his endeavours to simplify that mode of treatment. Mr Duncan as well as himself were at one time thoroughly Listerian as regards the spray, and they always had the most thorough faith in the principles brought forward by Mr Lister and in his practice. At the same time he (Mr Annandale), speaking for himself, had the feeling that the great disadvantage lay in the complication of the spray. It was always getting out of order. That did not matter so much in hospitals, but in private practice it was a great inconvenience. Obtaining so many good results from the antiseptic treatment, he always had the hope that the spray could be done away with, and it was in great part due to Mr Duncan's work that he was encouraged to give antiseptic surgery without the spray a trial. As a result he had come to the conclusion that the spray was not necessary. During the last nine months, in hospital and private practice, he had not used it. He had carried out very much the same practice as Mr Duncan, and it had been not only successful, but a very great improvement and simplification. The cases under his care, as those who knew him must be aware, were not few. The result of his practice in connexion with operations and accidental wounds was that he was more and more convinced that the spray was not necessary. He could refer to five or six cases in which he had cut into healthy knee-joints without the spray in this fashion, and without any bad results following. He was convinced that the results he had obtained by this more simple method were not at all inferior to those attained by means of the spray. At the same time he should like to guard himself by remarking that in other respects he still carried out the Listerian principles and practice.

Dr R. Maclaren said that Mr Duncan's communication was to some extent a surprise to him. It was not altogether so, as he read with great interest the paper of last year. It was a surprise to him, because some time ago, along with many other surgeons, he discontinued the use of the spray during operation, syringed wounds with carbolic lotion, and dressed with gauze under spray. His results were unfortunate. He thought that some corner was liable to escape washing and become a source of septic infection to the rest of the wound. He felt that every surgeon would welcome a simpler method than Lister's, if it were for nothing else than the comfort of his hands.

Dr F. M. Caird said the subject was full of interest to all of them. The most important point in Mr Duncan's paper was the successful treatment of his cases of empyema and psoas abscess, which were admirable test cases for the method of treatment he had introduced to their notice. At the same time, one could hardly accept his statement that the spray was inefficient or useless, and Mr Duncan himself had put on record a case where an empyema wound had gone wrong through some defect which occurred in the spray at one of the dressings. Now, it was extraordinary that on this one exposure when the spray went wrong the empyema should have become septic, and yet it remained all right on the previous occasions when no such defect occurred. There were cases on record where psoas abscesses had pursued a satisfactory course for many months with weekly dressings under the spray, but where momentary exposure without the spray had been followed by disastrous consequences. The dry dressing was a very important factor in the success attending Mr Duncan's treatment. He doubted if they would get good results from the glycerine preparation used along with the gauze and Mackintosh. As to the experiments made, if the spray were inefficient they would not get good results from inoculating flasks under the spray. The results of such inoculations had varied with different individuals, with draughts, and with the character of the air in the room, and, lastly, the germs found had not been of necessity septic germs. Micrococci and bacilli had certainly been found, but they did not, of necessity, cause putrefaction. Only in certain places and under certain conditions did Klein's test tubes swarm with organisms when exposed under the spray, and then it was some special form of bacillus that was present. In the same way he had himself seen a peculiar form of organism in a series of wounds which were pursuing a normal aseptic course, in all of which the use of an inferior sample of catgut had caused the inoculation.

Dr Heron Watson said there was a certain satisfaction in patiently waiting upon the retributive justice meted out by Time the avenger; especially so when one came to find that the views, which one held at a time when it was strongly hinted that those who held them were weak and foolish, obstinate and antiquated, were now being gradually accepted by the very persons who previously decried them. One after another of the various essential parts of the so-called "antiseptic system" had been given up as unnecessary, until pretty nearly the whole edifice had crumbled down, leaving very little of it standing. They had just heard to-night that bacilli were nothing, that micrococci were nothing, that bacteria were nothing, but that decomposition was everything. The whole question was begged in that statement. What had the bacillus, what had the micrococcus, what had the bacterium to do with the putrescent and with the suppurative changes in the wound? Any one who refused to accept all that Sir Oracle said a very short time ago regarding these matters was supposed to be incapable of practising surgery, and utterly unfit to be entrusted with the teaching of the rising generation of surgical practitioners. Such statements had been made, and not only made, but used to injure certain individuals. But it was well to wait, for when they waited they found that those very people who made such statements now turned round and said that those articles to which they formerly professed to have pinned their faith were not of importance, and that, in fact, they might be abandoned altogether. There was no surgeon within the last quarter of the century who did not believe in antiseptic principles, it was the methods alone which, constantly undergoing transformation, were unreliable. No doubt novelties were interesting, and new proceedings were attractive. Elaborate instruments, with mysterious joints and screws and sprays, whether worked by hand or by engine, were matters of the deepest interest to ingenuous youth, and very much calculated to draw together an admiring crowd of students, sometimes even to entertain them with the possible dangers of an explosion. After all, the whole thing was now ending very much in the fashion of the usual close of a pantomime. But when one came to consider what was the efficacy of the various methods of carrying out antiseptic principles, one could not help feeling that one grain of truth was infinitely superior to all the tons of theory which had been brought to bear on the matter from every possible quarter. It positively seemed, in the opinion of some authorities, that everything which succeeded was claimed as antiseptic surgery, everything which failed sinned against the principles of that mysterious faith. He much admired Mr Duncan's paper from the manner in which facts predominated. The results were in harmony with his own experience. He hoped the time would arrive when the young gentlemen who had been so thoroughly educated in those passing fashions would be able, as they gained some personal experience, to eliminate from their practice those mysterious methods which probably during their student years they were hardly capable of properly appreciating.

The President said he was not surprised at some of the remarks made by Dr Watson. He was very much interested in Mr Duncan's statements, more particularly as about two or three years ago he was instructed by the managers of the Infirmary to communicate with the Water Company, to ask them to turn on an extra quantity of water to work a spray in the large theatre. The gentleman who had made this request of the managers was Mr Duncan, and he could hardly believe his eyes when he saw him coming forward that night to say that the spray was of no use.

Mr Duncan replied that there was no reason why he should not think one thing at one time and another at another. Every one who had a mind of his own must do so. A few years ago he applied to the managers to have a spray fitted up in the large theatre of the Infirmary. The managers, who at that time were somewhat penurious, refused to supply steam-sprays, which were a serious item of expense to the surgeons. He suggested to them the propriety of putting a spray in the large theatre, and added, as a matter of economy, that they might get the Water Company to supply water to work it instead of steam. That was the history of the transaction to which the President referred. He believed then in the spray, and that it was of the utmost importance for the patient to keep the causes of putrefaction from entering the wound, and he regarded the spray as one of the means whereby they might be kept out. He was prepared to accept this as a fact, because of the statements made by others, and because he saw himself that it did no harm to the wound. He believed, therefore, that not doing harm it was probably an essential part of the antiseptic system. It was true that he had similarly changed his mind regarding the case of empyema. The case was one in which, for several dressings, the discharge had remained aseptic. During a prolonged exposure the spray went wrong. Two days after the temperature rose, the pus increased, organisms were found in it, and it had an odour. The change was distinct. He then attributed it to the spray going wrong, but this went wrong only for a moment. The wound was at once covered up. He believed now, after having made his experiments, that he was wrong in attributing the change to the defect in the spray. He believed now it was due rather to the lengthened exposure which he allowed, because of his confidence in the spray. During this exposure air entered the pleura with every expiration, and there was no doubt the spray was unable to destroy organisms which might have entered. On the other hand, a wound might be exposed for some time without becoming septic. It took a considerable time for a surface of three inches to become contaminated with certainty. A beaker of three inches took twenty minutes to become certainly septic. In certain places it might become septic in one minute. Once he had one exposed for fifteen minutes in his room in the Infirmary, then covered with a septic material, and it remained quite pure. The germs were also capable of being destroyed by the tissues. They must go into a wound in numbers to do harm. They must have gone in along with the spray in his case of empyema. The former process of dressing was not so effective in destroying or neutralizing them as his present mode, because the spray did not kill in time. Most recent experiments showed that microbia must be exposed to the action of carbolic acid for some time before being rendered innocuous. A germ entering with the spray might be dazed and stupid for a little, but it comes to again, and might do harm. A very interesting point with reference to antiseptic vapours was, that in order to make the atmosphere aseptic, they must charge it for a considerable time. For example, in experimenting with eucalyptus, they laid down a certain quantity and made it throw off its vapour for an hour. They then put in a beaker, exposed it for an hour. It became septic. At the next experiment they threw off the vapour for two hours instead of one, and they kept the beaker in for five hours without its becoming septic. It might be said this was due to subsidence; it was not, because he tried again without the eucalyptus, and let it subside, and the beaker became septic. The conclusion he had come to from all these experiments was that the spray was at the best useless, and that it might even do harm, because at its margin it was drawing in a quantity of septic air. The margin of the spray was the most dangerous part in the room. It could not be said that any germ which might be whisked in would be killed by the spray.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

EUPHORBIA PILULIFERA IN ASTHMA.—Dr Matheson, of Queensland, states that further experience with *Euphorbia pilulifera* confirms his very favourable opinion of its value in asthma, and that he has also found it excellent in the forming stage of bronchitis, common cold, etc. Mr G. S. Wragge, member of the Pharmaceutical Society of Queensland, states that "its effects on patients suffering from asthma is almost magical; in instances where all known remedies have failed to alleviate their suffering a few doses of the tincture have completely cured them."—*Therapeutic Gazette*, February 1884.

DROSERA ROTUNDIFOLIA IN WHOOPING-COUGH. — Dr J. Trueman Davies, in the *Therapeutic Gazette* for February, recommends *Drosera rotundifolia* (round leaved sun-dew) as a remedy in whooping-cough. This plant is exceedingly common in marshy places in Scotland.

HÆMAGLOBIN AS A THERAPEUTIC AGENT.—Dr F. E. Stewart, in the February number of the *Therapeutic Gazette*, strongly recommends hæmaglobin as a therapeutic agent. He says that he has had abundant opportunity to observe the effects of its administration both in his own practice and in that of others. He has had excellent results in cases of pneumonia, and in scarlet fever, where the fever process had nearly done its work, and the patients were nearly exhausted, by the administration of a teaspoonful of the powder (*sanguis bovinus exsiccatus*) in solution given in divided portions, so that the patients took that amount in the course of eight hours; and in no case did he find it necessary to use more than two or three teaspoonfuls during the twenty-four hours. Hæmaglobin may be prepared sufficiently pure for medical use by treating fresh bullock's blood with dilute hydrochloric acid (♏v. of the U.S.P. acid to water 1 fluid ounce) to prevent the formation of fibrin, and then evaporating to dryness. The product should be finely powdered and prescribed in solution. A teaspoonful of the powder three times daily will be found a sufficient dose for ordinary cases of impoverished blood. Hæmaglobin prepared in this way has associated with it a small proportion of other proteids, and the various salts of the blood. The product has an average composition of—hæmaglobin 85 per cent., 8 to 10 per cent. other proteids, and 5 to 6 per cent. salts, principally chloride of sodium. Iron preparations and pepsin are synergists to hæmaglobin. While it is true that the use of hæmaglobin alone is sufficient in most cases, the effect may be sooner gained in others by using some preparation of iron in conjunction with it. And these cases have been those where iron had first been used with poor results, the patients then placed on hæmaglobin, and improving during its use but slowly, and then the iron has been again added with excellent effect. In other cases there seems to be a want of power in the stomach to absorb the hæmaglobin, and in such cases this difficulty may be overcome by combining it with pepsin, thus,—

℞ Hæmaglobin, . ʒvj.
Pepsin, . . ʒj.
M.
et in pulv. sex divide.

Sig. One powder in water or wine three times daily.

In low states of the system, when a stimulant is indicated, he recommends,—

℞ Hæmaglobin, . . ʒvj.
Pepsin, . . . ʒj.
Glycerini, . . .
Spiritus rect, āā . ℥j.
Aquæ, . . . ℥iv.

Sig. A teaspoonful every three hours. He has used the above mixture with excellent results in the height of fevers, giving at first a teaspoonful of the mixture every hour, and gradually increasing the dose, carefully watching the bowels to see that it is absorbed. In the case of delicate stomach he specially recommends the following formula,—

℞	Hæmaglobin, . .	ʒiij.
	Pepsin, . . .	ʒss.
	Ferri et Quin. cit. .	ʒj.
	Glycerini, . . .	
	Vini. Xerici, āā . .	℥ijss.

Sig. Tablespoonful at meal-time. For all ordinary use it is sufficient to direct the patient to take a teaspoonful of the powdered hæmaglobin dissolved in water or wine three times a day.

RESORCIN FOR CYSTITIS.—Dr J. Andeer (*Centralbl. f. die. Med. Wissen.*) reports extensive use of *resorcin* in acute and chronic cystitis, and claims for it almost specific curative power. He reports 156 cases where, either by him or to his personal knowledge, it was injected into the human bladder with the best results in vesical catarrh. Acute cases have been entirely cured by the injection of a five per cent. solution.—*American Druggist,* February 1884.

RHUS AROMATICA IN ENURESIS.—Dr Palmore, in the *Therapeutic Gazette* for February, says, G. F., æt. 15, has wet his bed nearly or quite every night since his birth. Been "treated by everybody with everything," so his mother said; and she as well as the patient had given up all hopes of any relief. I prescribed 15 drops of Parke, Davies, & Co.'s fluid extract of *Rhus aromatica* in a little syrup to be taken after each meal, and two doses of same before bed-time, one hour apart, making five doses a-day. At the end of eight days all trouble had entirely ceased. I then omitted the remedy for a week to see if the enuresis would return, which it did not, but to make all things safe, I gave the remedy a week longer in same dose and stopped. This was two months ago, and there has been no recurrence of the trouble.

BROMIDE OF ETHYL AS AN ANÆSTHETIC.—In the *British Medical Journal* for 1st March, W. Roger Williams, F.R.C.S. Eng., recommends bromide of ethyl for short operations, and speaks of it as "destined to become a valuable addition to our lists of anæsthetic agents."

TREATMENT OF DIPHTHERIA.—Dr Alfred Carpenter, in the *British Medical Journal* for 1st March, thus speaks regarding diphtheria:—That treatment has been the use of ammonia as the proper stimulant, so as to reduce the acidity of the blood; for I have generally found these cases in constitutions which are either rheumatic with the lactic acid diathesis, or gouty, from the excess of lithic acid in the constitution. I have generally given alkalies, as lithia, or potass in combination with it; and when there has been an elevated temperature, which has indicated excessive chemical action in the invaded part, I have given the sulpho-carbolate of soda with the greatest possible benefit. This salt reduces temperature, most likely by its antiparasitic power; for as soon as a few doses have been given the fever subsides, and the patient is much relieved; but if the medicine be left off too soon there is certain to be a relapse. This is very disappointing, and, if the practitioner be disheartened, and try another remedy, his patient will probably die. But if he return to his sulpho-carbolate, he will ultimately destroy all the developing resting spores in the tissues of his patient, and lead him on to a perfect recovery. It is curious how in these cases organ after organ becomes involved in the disease; it is also curious, but highly satisfactory, that the congestions or embolisms follow one another in point of time, otherwise there would be very little chance for the patient to recover. I would urge the practitioner to continue the sulpho-carbolate in small doses, first with the ammonia, and after a time with quinine, avoiding altogether the mineral acids, as such appear to allow a more rapid development of the resting spores, and a further relapse.

As regards local treatment, I apply the powder of washed sulphur to the throat very frequently, blowing it into the fauces, and applying it by means of a brush with a little glycerine or honey, alternating the application with a little sulphurous acid in solution. It is not a painful application; it destroys the mycelium and the ordinary spores which produce the disease. If this be done quickly, so that the growths do not penetrate to the deeper tissues, no resting spores will find admission to the body, and there will be no following sequelæ. I have also been accustomed to advise that creasote be kept in the room, so that the air may be placed in that condition which diminishes, if it do not destroy, the growth and development of hyphomycetous fungi.

PERISCOPE OF OTOLOGY.

By Dr Kirk Duncanson, Senior Surgeon to the Eye, Ear, and Throat Hospital, 6 Cambridge Street; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

Report of a Case of Teratoid Tumour of Both Auricles, having a Clinical History of a Recurrent Fibroid.—The tumours promptly followed perforation of the lobe and wearing of gold ear-rings. They have repeatedly recurred during a period extending over twenty years. They have undergone remarkable change in structure. Mrs R., 29 years of age, light complexion, and of good average health. Father and mother both living, the former aged 64, and the latter 60. The mother's history is good. The father's history is one of more or less poor health, and for many years he has had a sore upon his cheek, which has spread and extended towards the nose. This sore has been pronounced cancerous, but has been completely cured by taking medicine for his blood. A sister of Mrs R. once had a small growth upon the lobe of one of her ears, which her mother cut off with a razor. In proof of the utility of this impromptu surgery, it is said that the growth never returned. Mrs R. began to wear ear-rings at eight years of age, and she has been operated upon every two or three years up till four years ago—once with a razor by her mother—and the tumour removed each time was as large, or larger, than the end of a man's thumb. As near as she can remember, she has had seven operations. The recurring tumours have usually appeared within a few weeks after each operation. On the 12th March 1883 she submitted to an operation by Dr Crandall and Dr Holt, in which the tumours and all suspicious tissue well up to, and at some points into, the outer margin of the ante-helix were excised; and for nearly four months afterwards there have been no indications of recurrence. One of the tumours was examined exhaustively by Dr Edward Preble of Portland, Maine. The tumour was somewhat kidney-shaped. It measured 3·5 cm. in length, 2 cm. in breadth, and a trifle less in thickness. The middle third of the concave border, with a small continuous portion of one surface, was occupied by a depression for the reception of the pedicle. Otherwise the entire surface was smooth and convex. The tumour was of a light gray colour, and was firm to the touch. The pedicle was 2·5 cm. in length, was strongly curved, and had been attached to the auricle throughout its entire convex surface. The whole mass weighed 10 grammes. In a general description of the tumour it is stated that it contained germinal matter in abundance, with the following tissues, viz.:—Myxomatous and adenoid tissues, giant-cells, fibroplastic tissue, loose areolar tissue with infiltrated fat, innumerable elastic fibres, fine and coarse fibrous tissue, hyaline, reticular and fibro-cartilage, smooth muscle, fragments of large bloodvessels and well-developed skin, with corium, papillæ, rete mucosum, epidermis, hair-follicles, hair and sebaceous glands, together with certain unclassifiable structures. The history of this case, with a very exhaustive account of the microscopic appearance of the various morbid elements forming the tumour, by Dr Preble, are given in a long and exhaustive but extremely interesting and instructive paper, accompanied by six beautiful drawings of the tumour and the microscopic sections, by Dr E. Eugene Holt, M.D., Portland, Maine, which he read before the sixteenth annual meeting of the American Otological Society, held at Hotel Kaaterskill, Catskill Mountains, N.Y., 17th July 1883.—*Trans. A.O.S.*, Vol. iii., Part 2.

A CASE OF VERY OBSTINATE DESQUAMATIVE OTITIS MEDIA FINALLY CURED, with remarks, by Dr H. Knapp, of New York, led to a very interesting discussion as to the restoration of the drum-membrane and the method of its reproduction. The members, holding that the membrane was restored, apparently admit that important portions have remained, having been pushed aside and obscured by the polypi, granulations and swollen condition of the mucous membrane of the tympanum, and on the restoration of the latter to a healthy condition the remains of the drumhead resume their normal position, and by the aid of cicatricial tissue an almost complete membrane is restored. Dr Jones referred to three cases in his own experience, where, after the existence of a suppurative process in one case for thirty, in another for twenty years, the restoration of a thin pearly lustrous membrane, stretching completely across, took place. I have met with several cases where a tolerably efficient membrane has been reproduced after restoration of a healthy condition to the middle ear, and, after many years' observation, find it very general that a considerable portion of the drum-membrane remains, and the ossicles even in very unfavourable looking cases. One case, a young man, 20 years of age, the subject of chronic suppurative inflammation in his left ear since his fifth year, and from which many polypi had been removed, I removed five in as many weeks. After the inflammation and swelling had subsided, and a more healthy condition established in the middle ear, the membrana tympani began to descend, as it were, the manubrium having the better part of the membrane coming downwards and outwards, leaving a comparatively small deficiency in the lower posterior segment. This opening has remained patent, and, we think, with much advantage both for hearing and the keeping up of a healthy condition in the tympanum, owing to a disposition to catarrhs in the head on the part of the patient.—*J. J. K. D.*

ON THE ASSOCIATION OF AURAL DISEASE WITH SIMPLE SPARKLING SYNCHISIS OF THE VITREOUS HUMOUR, by Charles J. Kipp, M.D., Newark, N.J.—Dr Kipp has found ear disease in six out of seven cases of simple synchisis scintillans. From the reports given of the cases, it is seen that the sparkling synchisis was confined to one eye in five of the cases; in two of these the ear of the same side only was the seat of disease, in the remaining three cases both ears were affected. In one case both eyes and both ears were affected. In five of the cases the ear disease involved the middle ear, and in one case at least, if not in all, also the nervous apparatus. In only one case are signs of middle ear disease absent. Dr Little, Dr Webster, and Dr Knapp, in the discussion which followed, stated that in the cases which they had met, since Dr Kipp had brought the subject under notice at a former meeting, no ear disease had been observed. Dr Kipp had again brought forward the subject chiefly to induce others who may meet with cases of synchisis scintillans to examine these cases for aural diseases, so as to settle the question.

THE RECOGNITION OF CEREBRAL COMPLICATION IN AURAL AFFECTIONS, by means of the ophthalmoscope, by J. A. Andrews, Staten Island.—Four cases of ear disease are reported.

Case I. *Otitis media purulenta chronica; abscess of middle lobe of cerebrum; double optic neuritis. Death.*—Patient, æt. 24, a house painter, had scarlet fever when 12 years old, since which time he has had more or less purulent discharge from his ears. While descending a ladder, Dec. 18, 1878, pain developed suddenly in his right ear and corresponding side of the head. Patient's mother informed Dr Andrews that two years after the scarlet fever he took cold in his ear, and suffered a great deal with his head. He had headache at times for several years. Inasmuch as the abscess was encapsuled, and death occurred a few days after the development of cerebral symptoms, we may justly refer the interval of ten years between the attack referred to by his mother and Dec. 18, 1878, as the period of latency. *Dec.* 21, 1878.—Temp., 103° F.; pulse, 100; resp., 30 per minute. Patient conscious, and talks intelligently. Hearing distance right ear, watch *ad concham*, acumeter, 1″. Left ear, watch *ad concham*, acumeter, 4″; quite deaf for conversation. With his right eye counts fingers at six feet; left eye, V. $\frac{20}{7}$. Double optic neuritis. 25th.—Patient died in coma.

Case II. *Otitis media purulenta chronica; optic neuritis; phlebitis sinus lateralis dextra; meningitis of convexity. Death.*—P. H., æt. 42, clerk, had purulent discharge from both ears for eight years. Three years ago there appears to have been an acute exacerbation, and he was treated for inflammation of the brain, *but the ears received no attention.* Previous to 5th July 1879 he had occasional slight headache, but now he suffered from severe pains in his head, chiefly of right side; was irritable; had vomited; had illusions and delirium. Temperature not above 100°·5 F. There was purulent discharge from right ear, exuberant granulations of tympanum; right optic neuritis; left disc hazy; veins large and dark-coloured, but not tortuous; R. vision $= \frac{20}{200}$: L.V. $= \frac{20}{80}$. Intensely sensitive induration extending in course of right internal jugular vein. R. mastoid opened. Died in coma, 9th July.

Case III. *Otitis media purulenta chronica; meningitis; optic neuritis. Recovery.*—J. E., æt. 19, has had purulent discharge from left ear for 18 months. Polypus from left external meatus, arising over bare bone, and two smaller polypi from the tympanic cavity, were removed on 16th Nov. 1880. Incision of left membrane allowed a considerable quantity of pus to escape. Mastoid process red and painful. Congestion of pharynx. Severe headache tending to left side and forehead. Temp. 101° F.; pulse 85 per minute. Restlessness and vomiting. Cannot see a certain picture on the wall. Left eye, marked optic neuritis; right eye, retinal veins enlarged, but not tortuous; disc very red, but not œdematous; no other change in fundus. After incision over the mastoid, which gave no relief, the mastoid cells were bored into, giving vent to blood and pus, and the establishment of a means of washing out the cells from the external meatus, a gradual improvement took place, leading in about three months to almost complete recovery. *May* 2, 1881.—The left optic disc appears normal; the right disc is slightly hyperæmic. R. E. V. = $\frac{18}{38}$; no improvement with glasses; L. E. V. = $\frac{18}{48}$; right visual field normal; left visual field slightly contracted.

CASE IV. *Otitis media purulenta chronica; abscess of the brain. Death.*—Mrs K., æt. 31, had purulent discharge from right ear for about thirteen years; there had been a discharge from the left ear, but it had ceased after a few weeks' duration spontaneously. There were two medium-sized polypi at the bottom of the right external meatus, with considerable ulceration in the canal above and behind the growths. The polypi were successfully removed in the summer of 1879, and at that time there were no visible changes in the optic nerve. On Dec. 2, 1879, she was complaining of severe pain in the head; referred to the right side. She had caught a severe cold whilst travelling by rail some three weeks previous. There was facial paralysis of right side, vertigo, vomiting, a temperature of 102°·8 F., and pulse 95. Mastoid not tender on pressure, nor does percussion cause vertigo or pain. There was beautifully developed neuro-retinitis in right eye; no changes in left eye; counts fingers at about ten feet with right eye. *5th.*—Patient is delirious. *7th.*—Patient comatose, no convulsions. She died after having lain in coma for six hours. *Autopsy.*—Corresponding to the point of ulceration in the external meatus, referred to above, a sinus was found extending into the antrum mastoideum. The roof of this cavity was destroyed by caries; pus to the amount of half a fluid ounce lay upon the carious bone. The dura mater overlying this collection of pus was very much thickened, but not perforated. In the right hemisphere of the brain a large abscess was found filled with greenish thick pus; the surrounding brain substance was œdematous, but not disorganized; the abscess was encapsuled, but had ruptured into the brain, in all probability, only a short time before death. The sinuses contained dark-coloured blood, but no clots. The right lateral sinus was unchanged.

(*To be continued.*)

PERISCOPE OF SYPHILOLOGY.

By FRANCIS CADELL, F.R.C.S. ED.

THE TREATMENT OF SYPHILIS.—In the *Medical News*, 26th January and 2nd February 1884, a clinical lecture appears by Professor Dujardin-Beaumetz. In it he sets forth at some length the fundamental principles of hydrargyrate medication. Notwithstanding the multiplicity of works on the subject, we are ignorant of the *modus operandi* of mercury, and while no medicine is in so general use in syphilis, there is none whose physiological action is more obscure. Mercury may penetrate the economy either by the digestive tube, by the respiratory passages, or by the skin.

How does this penetration through the skin take place? Some, as Overbech, Eberhards, Oesterlen, have pretended that mercury in the metallic state penetrates the subcuticular vascular network. Others, as Rindfleisch, have maintained that this penetration of mercury in the metallic state is impossible, and that it is only after having been transformed into a soluble chloride by the sudoral secretion that quicksilver enters the economy. The recent experiments of Fleischer give much support to these last views. Mercury is eliminated by divers emunctories, in particular by the kidneys, by the fæces, by the milk, by the sweat, and by the saliva. The fact of elimination by the milk, enables us to apply to the treatment of syphilis in the new-born child the administration of mercury to the nurse. The fact of elimination by the saliva explains the cause of salivation. Let us examine each of the methods by which mercury may become absorbed. The dermic method is the most ancient. For these inunctions mercurial ointment is used, the "fortior" and the "mitior." The stronger ointment is called the Neapolitan cerate. As it is generally admitted that mercury does not penetrate the system till it has been subjected to the action of the sudoral secretion, the rule has been to practise these inunctions on parts of the skin where the sweat glands are the most numerous, as in the arm-pit, the groin, the soles of the feet. Mercurial baths and plasters simply act locally. The hypodermic method is of recent date. It was Hebra and Charles Hunter who, in 1863, first practised sublimate injections. But the solutions then used were always painful, and it was only by combining albumen and peptones with corrosive sublimate that solutions were obtained, having a very feeble irritant action. It is necessary, in order to avoid accidents, to make these injections as deeply as possible. The respiratory method he considers in every way inferior to the hypodermic mode. The last method is by the alimentary canal, which is by far the most available and practical. The bichloride and biniodide is to be preferred to all others, and is especially the solution of Van Swieten which contains it, as the most active, in the first periods of syphilis, of all preparations given by the mouth. These preparations are always to be administered with food or with milk, thus avoiding as far as possible the irritant local action of corrosive sublimate on the alimentary canal. Other metals have been prescribed for syphilis besides mercury, such as gold, platinum, and even copper. Many attempts have been made to return to the vegetal treatment, but these anti-venereal specifics are utterly unreliable. Notwithstanding the results of Lewin, which have not been confirmed by other experimenters, jaborandi does not seem to have any curative virtues in syphilis. If the vegetal treatment is absolutely without effect, it is not so with the treatment by the iodides, and particularly by the iodide of potassium. The dose recommended is from thirty to seventy-five grains. Whenever iodide of potassium is given in massive doses, a milk diet should at the same time be prescribed, as milk, in favouring the elimination by the urine of the iodide, and in preventing the irritant action of this salt on the digestive tube, antagonizes the baneful effects of this medication. The doses should be small to commence with, and when the iodic coryza appears, let the medicine be discontinued for several days, to be resumed in larger doses. Next is studied in their order the treatment of the disease in general and of the disease in particular, *i.e.*, in the patient. Professor Fournier formulated, in a masterly manner, the general treatment of syphilis under the name of *method of successive treatments*. Fournier's system is based on stages of treatment and periods of repose, which latter, called by him *periods of discontinuing*, enable the economy to obtain release from habits imposed on it by the mercurial treatment, and derive the utmost possible benefit from the medication during its duration. So the first year he prescribes for two months the mercurial treatment, to be resumed after two months of repose. At the end of the second year he administers, concurrently with mercury, iodide of potassium, and the latter medicine exclusively during the third and fourth year. If in the great majority of cases all specific manifestations are made to disappear by a well-ordered treatment, religiously followed, nevertheless one can never be sure that the patient is rid for ever of syphilis. When the question of the marriage of syphilitic persons arises, such a marriage should not be authorized till after a treatment scrupulously followed for three or four years. At what time should the treatment be commenced? The sooner the better say Fournier and Mauriac. At the appearance of the first syphilitic manifestations say Sigmund and Seissl. The author believes the last advice the safer and wiser. The author thinks that all cases of syphilis should be treated with mercury and the iodides, notwithstanding that Diday has shown that a great many syphilitic patients get well without treatment. He is convinced that grave tertiary symptoms may supervene in persons who have had till then manifestations of syphilis so benign that this disease had passed absolutely unperceived by them. When speaking of the treatment of chancre, it is affirmed that the most energetic cauterization or even excision does not prevent the development of secondary symptoms. Local means are only adopted for healing the chancre, among which is mentioned the application of a five per cent. solution of iodoform in ether by means of a spray atomizer. In the secondary period mercury is depended on, and the liquor of Van Swieten specially recommended. In the transition period mercury and iodide of potassium are to be given together. Lastly, in the tertiary period iodide of potassium should be used almost exclusively. In the treatment of gonorrhœa the author recommends copaiba, but not to be given till the general inflammation has subsided. During this stage diuretic infusions or alkaline solutions which have a sedative action may be given. In subacute gonorrhœa he combines injections with the copaiba, the one most frequently used being three parts of tannin to 100 parts of glycerine. In vaginitis he recommends the insertion of a cone of wadding smeared with a pomade made of one part gurgun oil to two parts lime-water. A chloral injection is specially mentioned, one part of chloral to ten parts of water, of which a tablespoonful is to be added to a quart of cold water for an injection.

CAN SYPHILIS ACQUIRED DURING PREGNANCY INFECT THE FŒTUS?—Dr Simes discusses this subject in the *Polyclinic*, 15th December 1883. After duly considering both sides of the subject, he is inclined to the opinion that syphilis contracted during pregnancy may be transmitted by the mother to a previously healthy fœtus, provided the affection in the mother has passed beyond the initial lesion, and is made manifest by constitutional symptoms. This conclusion has been reached from a physiological and histological study, rather than from clinical observation. The inherent power possessed by the white corpuscle of surrounding or incorporating within itself any material substance with which it comes in contact, led him to conclude that these corpuscles were the chief, if not the only means, by which the virus was transmitted from one organism to another. Although there is no direct communication between the placental and uterine circulation, he believes that the white blood-corpuscle may be the carrier of the virus, by the power it is known to possess of penetrating and passing through the protoplasmic wall of the bloodvessels. The vital amœboid movement, the inherent power of incorporating within itself foreign substances, and the acknowledged power of passing through the walls of bloodvessels, are all attributes possessed by the white blood-corpuscle, and are, he thinks, sufficient to explain the manner and possibility of fœtal contamination.

MEDICAL PERISCOPE.

BY FRANCIS TROUP, M.D.

THE ARTIFICIAL MULTIPLICATION OF COW-POCK MATTER.—As narrated by himself (No. 52 of *Berliner Klinische Wochenschrift*, 1883), Dr Quist of Helsingfors has succeeded in cultivating the organisms, micrococcal or bacillary, to which the specific properties of vaccine-lymph are presumably due. This propagation outside of the animal body depends entirely on two things, the presence of oxygen and a suitable cultivation medium. The first is supplied by the atmospheric air, the second by some albuminous fluid; for example:—

Blood serum of the ox,	1 part.
Glycerine,	1 „
Distilled Water,	1 „
Carbonate of Potass,	$\frac{1}{300}$ „

The glycerine is added, not so much as pabulum, but to prevent a too rapid evaporation and in-drying of the albuminous solution; its presence also obviates risk of mildew, and is assisted in this direction by the weakly alkaline reaction of the liquid. Sterilization of this medium is brought about by heating it to 60° C. for one hour and a half on three successive days, with, of course, permanent exclusion of air. The most suitable temperature for the cultivations is an ordinary summer one, 19°–21° C., or a room temperature of 18°–20° C. A drop of vaccine lymph, of proved activity, is put on a morsel of sterilized sponge, and inserted into the fluid, or still better, a piece of epidermis from the covering of the vaccine pustule itself before this latter has dried too much. This layer of epidermis is permeated in a high degree by the vaccine virus, and the morsel lifted out having been duly washed, is ready for the cultivation medium, which may be contained in a watch glass or test tube. The former is covered with a shade, the latter is stopped with cork sterilized in boiling paraffin, and having a minute opening in its side. The evolutional processes can now be easily followed, especially in the watch glasses. The superficial layer of the nutritive liquid can in a few days be successfully inoculated; after 8–10 days oblique illumination shows the whole surface covered with very fine scales, not, however, forming a coherent crust; somewhat later, beneath this pellicle, a finely pulverulent sediment settles down. But, as already said, before this macroscopic alteration occurs the liquid is inoculable (*impfkräftig*), perfectly clear and colourless, or faintly yellow, and may be preserved in capillary tubes. Microscopic examination of the liquid, either clear or visibly cloudy, shows only the most minute micrococci. The scales on the surface, as well as the pulverulent sediment aforementioned, consist of swarms of such micrococci countless in number. Thirteen cases are given in which the inoculation of this fluid gave rise to normally developed vaccine pustules. Preserved in capillary tubes it retains its powers for weeks. As to the protective powers of such inoculations Quist can as yet say nothing, and awaits the first epidemic of smallpox for perfect demonstration. He has, however, carried into effect a preliminary trial in this direction. A child, exclusively inoculated with the artificial matter on November 4th, and who showed on November 11th five well-developed pustules from six scratches, was on the same day re-inoculated with lymph of natural derivation from the arm of another child. On November 18th only small dry papules were to be seen, just as a second inoculation usually behaves when undertaken seven or eight days after a first successful one.

THE OSMIC ACID TREATMENT OF PERIPHERAL NEURALGIÆ.—The published observations of Delbastaille regarding the parenchymatous injection of osmic acid into tumours, especially sarcomata and scrofulous lymphomata, have not failed to awaken a certain amount of attention, and have given occasion, among German surgeons, to many trials to either confirm or disprove them. If first formed expectations have not been realized, the perfect innocuousness of the proceeding has been at least verified. Lately, Neuber, in the Kiel clinique, has carried the local use of osmic acid into a new sphere, using it in obstinate neuralgiæ. His three reported cases, sciatic and trigeminal, were discharged cured after 10–24 injections. Such alluring results, strongly contrasting the uncertain action of most of the customary palliative or curative measures, determined Eulenburg to put the drug more extensively to proof. His polyclinique afforded abundant material, and he was aware of no evil, local or general collateral phenomena, occasioned by such injections. Cases of neuralgia in the territories of various cutaneous nerves of the upper and lower extremities of the head and trunk were selected for experiment. The duration of treatment varied from one to six weeks; the number of injections in single cases from 3 to 14. The strength of solution used was one of acid to one hundred of distilled water; the actual injection dose was seldom more than 5 centigrammes. No disturbing, local or remote, after effects ever showed themselves, and it was remarkable that an acid, so pungent and so irritating to the external mucous membranes, administered subcutaneously or parenchymatously caused so little pain. To secure its anti-neuralgic, palliative, or curative effects, it is of the greatest importance to inject *in loco morbi*, in the utmost possible proximity to the affected nerve and its paraneurotic connective tissue. The diffusion power of the acid is such that it can, from thence, easily penetrate to the perineurium and the conducting nerve substance itself, and so possibly in diseased conditions of the same, exercise its local influence. A table of twelve cases is given; the ages ranged from 29 to 65, three were males and nine females; the results are certainly not brilliant. Only three cures, that is to say, no relapse within 2–14 weeks; in four, more or less unsatisfactory improvement; in five, treatment apparently useless. Eulenburg accentuates the fact that the three cured cases were tolerably recent, uncomplicated, and of probably neuritic or perineuritic origin, whereas the failures were ancient or complicated and multiple forms of neuralgic affection. He thinks, however, that osmic acid is not quite ineffective in peripheral neuralgiæ, that it is not anti-neuralgic in the strict sense of the word, that its therapeutic powers must be attributed to the local tissue alteration (a circumscribed induration and cicatricial contraction and puckering) brought about by the injection and at the spot where it is delivered.—*Berlin. Klin. Wochensch.*, 1884, No. 7.

Remarkable Case of Empyema.—Professor Pel, of Amsterdam, reports this case as a contribution to the differential diagnosis of empyemata and pericardial effusions. The patient, æt. 32, was a strong healthy man, who had been ill four weeks before admission into the clinique. The diagnosis was made of a left-sided pleural exudation, with compression of the upper lobe of the lung, and on account of local and general appearances, the effusion was considered to be purulent. An exploratory puncture confirmed this view, and as dyspnœa and cyanosis were great an incision was made into the chest between the eighth and ninth ribs, in a line with the posterior border of the scapula, and a very large quantity of pus evacuated; the pleural cavity was then washed out, and chest bandaged antiseptically. Although the patient's condition was relieved after the operation, still it was not satisfactory. The pulse was weak and moderately filled, and beat 100–120. The respirations varied from 40 to 48. Temperature was intermittent, with evening exacerbations of 40°·5 C.=104°·5 Fahr. In short, there were tokens of purulent infection of the blood. Rigors set in, and on removal of the bandage no bagging of pus was to be found in the left pleural cavity, and the right lung was normal, but there was a very visible prominence of the region of the heart between the third and fifth ribs, about the size of the palm of the hand, beginning 1 ctm. from the left sternal border, and stretching outwards to the mammillary line. Over this the skin was normally coloured, not œdematous, but was very painful on pressure. No fluctuation could be felt. A distinctly visible or palpable impulse of the heart was not present, but yet minute examination revealed, between the fourth and fifth ribs, just inside the mammillary line, over a surface of say 2 ctm., a faint undulatory movement; even when patient lay on his back this motion could be felt. Percussion of cardiac region gave absolute dulness from upper border of third rib, toward the right for 2 ctm. beyond the right sternal border, toward the left for 3 ctm. beyond the mammillary line, consequently 2 ctm. beyond the spot where the undulation was felt. The figure of the dull region, which had a maximum height of 14 ctm. and a breadth of 16 ctm., and was of the truncated triangular form so characteristic of pericardial effusions, showed no alteration on change of patient's position, could not be traced out below, and was bounded in the left lateral region by a muffled tympanitic resonance. Auscultation gave no pericardial friction, the heart-sounds were not very audible, but were pure, so far as could be made out. On right of the dulness strong vesicular breathing, in left lateral region *indefinite* respiration. The lung-liver boundary was at upper border of sixth rib. Upon the following grounds,—(1) the shape of the dulness (truncated triangle), (2) prominence of cardiac region, (3) the scarcely audible cardiac sounds, (4) the undulatory movement in fourth intercostal space, and (5) the constitution of the pulse (irregularity, disharmony between the filling of it and the weakness of the heart-sounds),—the diagnosis was made of a pericardial effusion; and considering the general condition of the patient, the course of the fever, the rounded prominence of the cardiac region, and finally, the preceding purulent inflammation of left pleura, of a pericarditis exudativa purulenta. Exploratory puncture, made in the position of greatest prominence, between third and fourth ribs, 3 ctm. within the mammillary line, gave 2 grms. of laudable pus. No pulsations were transmitted to the cannula. An incision of the pericardium was now carried out a little outside of the parasternal line between third and fourth ribs. Isochronous with the action of the heart, and *per saltum* a large quantity of pus, at least 1½ to 2 litres, was evacuated, and then the cavity was washed out with boracic acid solution, a drainage tube put in, some iodoform strewn in the interior, and an antiseptic bandage applied. The finger introduced into the wound could feel the heart's beat. Immediately after the operation, which was well borne, the filling and tension of the pulse were increased in a remarkable way, as also was the intensity of the cardiac sounds. Patient died, however, on the third day after the operation, with complaint of abdominal pains, diarrhœa, and vomiting. The autopsy showed that there was no pericardial effusion, but that there were two quite separate encysted empyemata. The one behind was nearly healed. The second one was bounded on the inside by the pericardium, outside by the pleura-pulmonalis of the left upper lobe. This purulent cavity was situated just alongside of the left heart, and formed, so to say, a hem or border to it, extending from 2nd or 3rd rib to the diaphragm. The clinical interest of the case culminates in the difficulty of the diagnosis, for it shows that an empyema of the left side in front may give not only the clinical, but also the physical symptoms of a purulent pericardial effusion. If one recalls the physical signs—(1) the triangular figure of the dulness, (2) the weak cardiac sounds, (3) the undulatory movements inside the left limb of the triangle, (4) the disharmony between pulse and weakness of the heart-sounds, (5) the prominence of the cardiac region, (6) the pus evacuating itself in jets synchronous with the heart's action, and (7) the tangible impulse of the heart on introduction of a finger into the wound—Professor Pel thinks no one would have doubted the presence of a pericardial effusion, at least, he firmly believed that he had opened into the cavum pericardii. The explanation of the phenomena observed in this patient is not very difficult. The characteristic dulness simulating pericardial effusion depended on several factors: 1, inflammation of external layers of the pericardium; 2, the displacement of the heart to the right; 3, the great thickness of the pericardium (it was almost the thickness of a finger); and, lastly, the dilatation of the heart. The cardiac weakness, of course, was occasioned by compression of left auricle and ventricle, and secondary alterations of the heart-muscle, and, finally, the inflamed and adherent condition of the pericardium. The undulatory movement was the result of the motions of the heart communicated to the purulent collection, and the *per saltum* discharge of the pus during diastole is easy to comprehend. The case teaches the following lessons:—1. Every incisio thoracis should be preceded by an exploratory puncture, so that the presence of matter at the spot to be incised may be absolutely demonstrated. 2. An encysted empyema in the left front of the chest—pericarditis suppurativa externa—may call forth the same clinical and physical signs as a purulent pericardial effusion, and render a differential diagnosis almost impossible. 3. In both cases treatment would be similar: the operative withdrawal of the purulent exudation.—*Berlin Klin. Wochensch.*, 1884, No. 8.

A PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. GIBSON, M.D.

THE DISTRIBUTION OF UREA IN THE BLOOD.—Gréhant and Quinquaud have undertaken an investigation into the amount of urea in the blood, of which the first instalment has just been communicated to the Society of Biology of Paris. The main object of the inquiry is to determine the source of the urea. In the first place, as will be seen from the annexed table, they have ascertained the relative quantity of urea in blood *going to* and *coming from* the periphery, and afterwards they have determined the relation between that of arterial blood and that in the abdominal veins. The table expresses the amount of urea in milligrammes per 100 grammes of blood. The experiments were performed on dogs:—

Experiment.	*Source of blood.*	*Urea.*
I.	Femoral Artery	33 mm.
	Femoral Vein	31 „
	Jugular Vein	31 „
	Superior Vena Cava	33 „
II.	Carotid Artery	52 „
	Hepatic Vein	55 „
III.	Carotid Artery	35·6 „
	Splenic Vein	37·7 „
	Hepatic Vein	39·1 „
IV.	Carotid Artery	57 „
	Hepatic Vein	66 „
V.	Carotid Artery	40 „
	Hepatic Vein	44 „
VI.	Carotid Artery	32·4 „
	Hepatic Vein	40·2 „
	Splenic Vein	39·4 „

These figures show—1. That there is about the same quantity of urea in the blood returning from as in that going to the periphery, from which we may conclude that any urea which may be formed there must be carried to the centre of the circulation by the lymphatics; and 2. That the blood coming from the spleen and the liver is always considerably richer in urea than the arterial blood, especially during digestion (experiment IV.) The difference may be as much as 9 milligrammes in every 100 grammes of blood, in this condition, and if we suppose that 100 grammes of blood come from the liver every minute, carrying an excess of 9 milligrammes of urea, it gives 540 milligrammes per hour, or 13 grammes in twenty-four hours. On the other hand, if the animal is fasting (experiment II.), the difference may only be 3 milligrammes per 100 grammes, which, on the same supposition as to blood-flow, gives 180 milligrammes per hour, or 4·32 grammes per day.—*Comptes rendus hebdomadaires des Séances de la Société de Biologie*, 28th March 1884.

A NEW FUNCTION OF THE RED CORPUSCLES.—Fano has studied the manner in which peptone is altered after being injected into the blood of animals. It is a well-known fact that it cannot be detected half-an-hour after injection, and by very careful investigation he thinks he has proved that the red corpuscles have the power to transform the peptone into globulin. The corpuscles after a certain time give up the globulin to the tissues, and thus form a nutritive reserve. We may liken the process to the glycogenic function of the liver cells.—*Sperimentale.* Abstract in *Centralblatt für die medicinischen Wissenschaften*, 12th January 1884.

MOTOR FIBRES IN THE CARDIAC PORTION OF THE VAGUS.—Wedenskii has made some telephonic researches into the heart-sounds which seem to point to the existence of motor filaments in the cardiac branches of the pneumogastric nerve. Although the subject can scarcely be held to fall directly within the domain of clinical or pathological work, it nevertheless has many bearings on practical medicine, and may well find a place here, for if Wedenskii's conclusions should prove to be correct, we shall probably have some new light thrown on the nature and treatment of certain abnormal states of the heart. The heart of a dog was connected by means of two needles with a telephone, and on listening the normal heart-sounds were heard. The vagus was then stimulated with a weak current, which only slowed the rate of the heart's action, and a series of short sounds could be heard, accompanying the normal sounds. When the electrical stimulus was augmented in strength, so that the heart was stopped, nothing could be heard. After the injection of atropia by the jugular vein, to paralyze the inhibitory fibres, these sounds could be produced by any strength of current; and on the other hand, after the administration of curara to paralyze the motor fibres, no sounds could be caused by stimulating the vagus. From these facts Wedenskii concludes that there must be in the pneumogastric nerve some sort of motor control over the heart.—*Centralblatt für die medicinischen Wissenschaften*, 5th January 1884.

PEPTONURIA.—From an investigation of the frequency with which peptone appears in the urine, von Jaksch has drawn some interesting conclusions. It was found in 76 out of 354 cases; 72 being instances of inflammation or of pus accumulation, 3 of scorbutus, and one of phosphorus poisoning. He agrees with Hofmeister in thinking that the peptone is not merely dissolved in the pus (in those cases where pus formation is the predominant feature), but that it is contained in the pus corpuscles. With reference to the cases which were not purulent, he is of opinion that from the increase of white corpuscles, as well as of the products of their destruction in the blood, it may be concluded that peptone may be set free in the blood by the destruction of these corpuscles, and may be excreted by the kidneys. He gives some examples showing that the onset and course of peptonuria may be of use as a sign of the commencement and cessation of the absorption of inflammatory products.—*Zeitschrift für klinische Medizin*, Band vi. s. 413.

PERISCOPE OF GYNÆCOLOGY AND MIDWIFERY.

By J. MILNE CHAPMAN.

ELYTRORAPHIA MEDIANA, OR ELECTROCLEISIS PARTIALIS MEDIANA OF NEUGEBAUER AS A MEANS OF OPERATIVE TREATMENT FOR COMPLETE PROLAPSE OF THE UTERUS (A. Sokoloff, from the clinique of Prof. Slavjansky, St Petersburg, *Annales de Gynécologie*, January 1884).—The writer accredits the first operation of the above character to Gérardin of Metz, who performed it in 1823. Then Neugebauer in Russia operated in 1867, and in 1880 had thus treated 11 cases of prolapse, 10 of them with success. In 1877 Le Fort, with whose name the operation has become associated, published his cases, and, according to the present writer, there have been recorded till the end of 1882 15 operations after his methed—12 in France, 3 in America: of these, 12 have given good results, while in 3 union has not occurred. During the five years 1877–82 Slavjansky has operated fourteen times, and has considerably altered the manner of operating in its details. He operates without chloroform or other anæsthetic, regarding the use of such unnecessary on account of the great insensibility of the vaginal mucous membrane. The freedom from sickness after the operation, when done without anæsthetics, he regards as of great service in favouring union. In proceeding to raw the mucous membrane, he does so in divisions, rawing first the parts where the first sutures will be placed, then passing the sutures, and securing them before proceeding to raw the next portion. A douche of carbolic lotion is kept constantly playing over the parts. He uses sutures in two pieces thus—one piece is passed from side to side behind the denuded surface on the anterior wall, and a second piece is passed behind the denuded surface on the posterior wall at a corresponding level, and the two free ends on one side; the right are first twisted together, and then tension is put on the two free ends on the left side, and they are likewise twisted. Silver wire is used, and the ends cut short. Slavjansky attaches great importance to this form of suture, which, he states, secures much more perfect and level coaption than is attainable by other means, and he also urges the cutting short of the ends, as he has found that, when left long, considerable irritation, and even ulceration, of the external parts may be occasioned. The surfaces to be rawed should measure 4–6 centimetres long, and 2–3 broad. The upper limit should be ½ or 2 centimetres below the union of the vaginal *cul de sac* with the neck of the uterus, and the lower 2½ or 3 centimetres above the entrance of the vagina. Eight to fourteen sutures are used, and at the lower limit of the rawed surfaces two or three ordinary stitches are passed. The sutures are removed from the seventh to the twenty-first days—not all at once, but at two or three sittings. For the first two or three days the catheter is to be used; on the third day an injection or a laxative is given. Vaginal douching is only used where there is much leucorrhœa, or when menstruation occurs. On the tenth day, even though all the stitches are not removed, the patient is allowed out of bed, and no mechanical apparatus is used to support the perineum. A complete table of 13 cases operated on by Slavjansky, and 1 by the writer, is given. A contraindication for this operation is, according to the writer, the unequal rolling out of the vaginal walls. In conclusion, the writer states that an operation for the repair of the perineum is not absolutely indispensable in some cases, and that "the simplicity and facility which this operative treatment offers—by the dispensing with the use of chloroform and of specially skilled assistants—permit of its being employed in country practice, and as much cannot be said of other methods of operative treatment for prolapse of the uterus."

NOTE ON AN OSTEOMALACIC PELVIS; FOURTH PREGNANCY; CRANIOTOMY AT TERM (Award, *Ibid.*)—On 29th September 1883 Prof. Tarnier delivered a patient in the Paris Maternity by performing perforation and cephalotripsy, it being found that her pelvis was a typical malacosteon one. Her previous history was as follows:—In her early life she had been very healthy. Married at the age of 27 in 1874, she had a child the following year. She came to Paris from Savoy in 1875, and in 1876 became again pregnant. During the last months of this pregnancy she became ill, but was not obliged to take to bed, simply to pass a good deal of her time on the sofa on account of a bruised and fatigued feeling. The confinement was normal, and in 1877 she was admitted into a hospital on account of a continuance of her illness. There she was kept in bed two months, during which time she had pains all over her limbs, aggravated when she attempted to move, and on moving she felt as though her bones were breaking. The diagnosis come to at that time was, according to the patient, disease of the spinal cord and paraplegia. On her return home from hospital she at once became pregnant, and had to keep her bed during the whole pregnancy. The confinement in November 1878 was easy. She remained in bed till the following January, and from then onwards she gradually improved; but she commenced her ordinary occupations before she had thoroughly recovered. The fourth pregnancy began in 1883, and terminated as mentioned above.

ON CONCEPTION OCCURRING DURING AMENORRHŒA (Petit, *Annales de Gynécologie,* March, April, June, and October 1883).—At the conclusion of this paper, which contains numerous carefully observed cases, the writer says that we often see instances where, though ovulation occurs, there is no corresponding discharge of blood from the uterus, but that this does not prove, as has been asserted, that the two processes are independent of each other, it only proves that under certain pathological circumstances, local or general, and more or less easily determined practically, ovulation may occur without occasioning sufficient excitation of the genital system to bring about the usual hæmorrhagic discharge from the uterus.

THE ALBUMINURIA OF PREGNANCY (Doléris, *Progr. Méd.,* 1883, No. 30).—The writer does not treat of the lighter forms of albuminuria which occur in the latter six weeks of pregnancy, as he regards them as always being of passive causation, but of the more pronounced forms coming on at the end or about the middle of pregnancy, and leading to severe disturbances, eclampsia, etc. In such cases the urine contains, according to the writer's observations, a quite characteristic micro-parasite, having the form of a long knotted chain, which consists of short bacillus segments, broken up by highly refractive points. The urine remains acid, and does not become ammoniacal. Injection of the cultivated bacilli into the veins of rabbits occasions albuminuria, resulting in death, with convulsions, paralysis, and extreme slowing of respiration. On examining the urine after such injection experiments, parasites are found similar to those previously described, and such can also be detected in the blood.

THE INFLUENCE OF DIABETES MELLITUS ON THE FEMALE GENERATIVE FUNCTIONS (Hofmeier, *Berliner Klin. Wochenschrift,* 1883, No. 42).—The writer points out that the fact of diabetes exercising a depressing influence on the male genital apparatus has long been recognised, but that whether, and if so, to what degree, a similar influence is exerted in the female, is still an open question. In a case of diabetes that came under his notice on account of pruritus vulvæ, the writer found the uterus decidedly atrophied, measuring barely 2 inches. Professor Schrœder examined the case under chloroform, and found that the ovaries were also very small and atrophied. As there was no other disease to be found in the case, and as the girl, aged 20, had been previously healthy and strong, the writer assumes that the diabetes had led to the general atrophied condition of the genital organs present.

ON TOTAL EXTIRPATION OF THE CANCEROUS UTERUS (Rokitansky, *Wien. Med. Presse*, Nos. 21 and 22, 1883).

ON THE SAME (Veit, *Ibid.*, No. 26).

AGAIN ON THE SAME (Rokitansky, No. 28).—In his first paper, Rokitansky takes up a very decided position against the operation of removal of the cancerous uterus, saying, that it does not require any knowledge either of the operation or of its statistics to condemn it, a due knowledge of the anatomy, pathology, and clinical history of uterine cancer being sufficient. The results of the operation he states as being very bad. Of 95 operated on by Freund's method, 65 died as a direct result, while of the remainder none remained long free from the disease. Of 68 operated on by the vaginal method, 28 died, while in the majority of the remainder the disease was reproduced within six or eight weeks. Rokitansky further quotes Kochs to show that the operation may occasion a more rapid spread of the disease than would have probably occurred had the patient been left alone. What can be accomplished by the operation, he says, is out of all proportion to its risks and dangers, and he puts the pertinent question, whether any one would allow it to be performed on any near relation. Veit finds fault with Rokitansky for condemning an operation he knows nothing of, and refers to the work by himself and Ruge as showing that Rokitansky's notions of the pathology and clinical history of uterine cancer are erroneous. He states that the cases really suitable for operation are very few, and that the bad success hitherto reported results from unsuitable cases having been operated on. He states that of Schrœder's first 6 vaginal operations, 1 has remained two years free from the disease, while he himself has had 1 of his 5 cases which has remained free for one year. Without doubt, he adds, such cases will become more frequent when only suitable cases are operated on. Rokitansky replies that it is really impossible in the living subject so thoroughly to examine the parametrium, as to be able to say that the lymphatic vessels or glands are free from disease, while post-mortem microscopic examination almost invariably demonstrates the wide diffusion of the cancerous infiltration at a very early period in its history.

THE TREATMENT OF THE THIRD STAGE OF LABOUR (Dohrn, *Deutsche Med. Wochenschrift*, 1883, No. 39).—In this paper the writer considers the results of his examination of the histories of 2000 normal labours occurring in Hildebrandt's clinique, in the first 1000 of which the placenta was delivered by the Credé method, while in the remainder a purely expective treatment was adopted. In no other respects was there any difference in the management of the cases. As a result, he states:—1. In the 1000 expectantly-treated cases the results were, on the whole, better than in the 1000 in which Credé had been adopted. 2. In the expectant cases there was less bleeding, less retention of portions of membrane, and less puerperal fever than in the Credé cases, where retention of portions of membrane, and resulting puerperal fever, sometimes fatal, was of frequent occurrence. 3. In the Credé cases he found that the most frequent bad results followed in cases where the placenta had been expelled within five minutes after the birth of the child, while the longer period of time that was allowed to elapse before the placenta was expelled, the fewer bad results occurred.

SURGICAL PERISCOPE.

By A. G. Miller, F.R.C.S.E.

Dislocated Shoulder and Simulated Rupture of the Axillary Vein (under the care of Mr Hardie, Manchester Royal Infirmary).—F. S., a woman, seventy-two years of age, was admitted to the accident room of the Manchester Royal Infirmary on the evening of 29th December 1883, complaining of injury due to a fall on her left shoulder. The shoulder presented the usual signs of subcoracoid dislocation, but there was in the mid-axillary line, about opposite to the fourth rib, a soft ill-defined tumour about the size of a small orange; the veins over the shoulder were much distended. An attempt was made to reduce the dislocation by the thumb in the axilla, but on trying to do so the tumour very rapidly increased in size, and in the course of a few minutes was as large as a football and very tense. The veins were much distended, the radial pulse but slightly weaker than that of the opposite side. The diagnosis arrived at was probable rupture of the axillary vein, and as the only practicable treatment appeared to be amputation at the shoulder, Mr Hardie was sent for. Pending his arrival, the arm was enveloped in a wet bandage and the tumour and chest enclosed in an Esmarch's bandage. About an hour and a half later, when this was removed, the tumour appeared much less tense, but more diffused. It rapidly became tense again. Amputation was resolved upon, but consent could not be obtained, and the bandages were reapplied and the patient returned to bed. On the following morning the tumour appeared again less tense and did not swell up on removing the bandage. The dislocation was easily reduced without chloroform, there being no further swelling. There were marks of ecchymosis in the axilla. The arm was fixed to the side and an ice-bag applied to the side and back. On 31st December there was distinct swelling and discoloration down the back from the neck to the sacrum, but no signs of inflammation. Ice-bags were continued until 5th January 1884. The swelling gradually subsided, the discoloration disappearing with it. There was never any inflammation or sloughing. The temperature was normal throughout. On 19th January the patient was sent home with merely some stiffness in the shoulder-joint. The enormous rapidity of the swelling in this case, with great dilatation of the superficial veins, led to an error in diagnosis, which, but for a fortunate accident, would have led to a mistake in treatment serious at least, and, if primary amputation at the shoulder had been resolved on, probably fatal. Doubtless the real condition was rupture of some large, probably arterial, branch in the axilla, causing the rapidly growing tumour and, by pressure on the vein, the dilatation of its branches.—*The Lancet*, 1st March 1884.

DISLOCATION OF ONE OF THE SEMILUNAR FIBRO-CARTILAGES OF THE KNEE-JOINT.—At the Clinical Society of London, on 22nd February, Mr Noble Smith read notes of a case of "Dislocation of one of the Semilunar Fibro-cartilages of the Knee-Joint." The left knee was first injured sixteen years ago by a fall. Great pain was felt, and while being carried home the patient was upset, the knee again twisted, and the intense pain immediately relieved. The subsequent history was that of repeated injury from trivial causes and a continued state of weakness of the joint, with discomfort or pain during movement. On 11th November 1882, this patient was first seen by Mr Noble Smith. A stiff knee-cap was being worn, and any locomotion was very difficult. The knee was slightly flexed, and could not be moved without pain. The internal cartilage of the left knee was felt to project slightly beyond the upper border of the tibia. Upon pressure being applied to this protrusion while the leg was flexed and extended repeatedly, the cartilage was felt to slip back, after which the patient walked round the room quite naturally, and felt a relief which had only once been experienced since the first occurrence of the accident. A pad was strapped over the place where the cartilage had protruded. During the next few weeks there was a tendency to relapse, but by perseverance with the treatment the joint was gradually worked into a natural condition. An apparatus was made which, while it permitted flexion and extension of the leg, prevented lateral motion and twisting. Walking exercise was recommended from the first, provided no pain was felt. This patient has remained quite well up to December 1883.—*Lancet*, 1st March 1884.

HALLUX VALGUS—OPERATION—CURE.—Dr Lewis Hall Sayre presented the heads of the metatarsal bones of the great toe on each foot, removed on 24th September for the relief of hallux valgus. The man was forty years of age, and otherwise perfectly healthy. The condition had existed for many years. The joint on the right foot had suppurated twice, but no bone had ever been discharged. A straight incision was made over each joint and carried down through the periosteum, which was raised with an elevator, and the head of the metatarsal bone removed by means of bone forceps. The operation was performed antiseptically, horsehair drainage was employed, and the wound was closed with black silk sutures. Union was complete within two weeks, without suppuration. The patient was discharged able to walk without trouble and with movable joints.—*The New York Medical Record*, 22nd December 1883.

ARTERIO-VENOUS ANEURYSM.—This affection is so rare in the present day that the case reported by Mr T. Pickering Pick, in the *Medical Times and Gazette* of 15th December, must be of interest to all surgeons. The case was that of a police constable who had been shot in the thigh. The course of the bullet seemed to cross the femoral artery, the wound of entrance being in the inner side of the thigh about six inches below Poupart's ligament. The bullet was found lodged in the outer and back part of the thigh. The patient had lost a large amount of blood before being admitted to St George's Hospital. The bullet was removed, and the wound healed. On the 21st day after admission the presence of a large pulsating tumour in the neighbourhood of the anterior wound was noticed. The existence of an arterio-venous aneurysm was diagnosed from the powerful thrill. Mr Pick considered that the cause had been the passage of the bullet between the artery and vein, wounding both. Neither of these vessels was occluded. The treatment proposed by Mr Pick was to apply pressure and wait, and then to ligature the femoral artery above and below the communication should his colleagues approve. We shall watch with interest for the result of this treatment.

Part Fifth.

MEDICAL NEWS.

THE celebration of the Three Hundredth Birthday of our University has been held under most auspicious circumstances amid great public rejoicings. Town and Gown have combined to make the event one of interest and importance in the eyes of the civilized world. The result shows that they have succeeded. The

Receptions (and not least among them, the Students'), the St Giles' Commemoration Service, the Academic Ceremonial, and the great Banquet, are events that are not likely to be forgotten by those who have been privileged to take part in them, however minor a part that may have been. Edinburgh has been honoured by the presence of many distinguished men, who have in turn been delighted to accept those honours which she was able to bestow on them. Virchow, Helmholtz, Pasteur, Russell Lowell, Browning, and a host of other names famous in medicine, in science, and in art, are now inscribed in the list of the members of the University. It has been a privilege to us to have them among us even for a few days, and the words of wisdom and encouragement they have left behind them will be an incentive to yet greater and better work than has been accomplished in the glorious past. Now that rejoicings are over, and have a place only in our memories, we may confidently predict that neither the University nor the Extramural School will stand still on the reputation of the past, but will seek to emulate each other with the friendly rivalry that has distinguished them hitherto, and so continue to advance medical education as has rarely been done elsewhere in the United Kingdom.

THE Annual Festival of the Harveian Society was held in the Hall of the Royal College of Physicians on the 14th ult. Occurring as it did at the beginning of the Tercentenary Celebration week, it might be said to have formed practically the first item in the round of festivities which heralded the 300th birthday of the University. Among the more distinguished guests were the Lord Mayor of London, Prof. Virchow, Sir John Reid, Director-General Navy Medical Department, Dr Crawford, Director-General A.M.D., M. d'Abbadie, Dr Mouat, Dr Fordyce Barker, Dr Shapter of Exeter, Dr Chavasse and Dr Cassidy of the Lancaster County Asylum. The President, Dr Keiller, occupied the chair, and delivered an oration on "The Medical and Surgical Profession in Edinburgh Half-a-Century Ago" (see p. 977).

Dr Shapter of Exeter, in proposing a vote of thanks to the President for his very interesting address, said that returning, as he did, to this city after an absence of fifty-four years, it had roused in him the delights and pleasures of memory. His first recollection was of that venerable man, the old Duncan, whose last introductory lecture he had had the pleasure of listening to. What the President had said of the days of Burke and Hare vividly alized much of what had passed under his own eye, for he was e pupil who had dissected Burke's body for Alexander Munro's tures. He believed also that he had seen the first amputation the hip done in the Edinburgh Royal Infirmary, the operator ing Liston. He had carefully rehearsed the method of amputation [illegible] ie in Alexander Munro's room, and did the operation [illegible] y—within twenty seconds—that very few of the crowd of students who were present saw it, it being over before they were aware that it had been commenced. There was one blot on the old operating theatre, and that was that it was used for post-mortem examinations as well as operations. (Hear, hear.)

The company then sat down to dinner, the President being in the chair, with the Lord Mayor of London on his right hand, and Virchow on his left. Grace was said by the Rev. Dr Grant, and thanks returned by the Rev. Mr Belcombe.

The *President* proposed the usual loyal toasts, which were drunk with much enthusiasm. In speaking of the Army and Navy, he said he was not prepared to enlarge on this subject, but at this particular time they must be spoken of with enthusiasm. The blue-jackets and red-coats had asserted themselves nobly together, and their deeds were regarded with admiration. As to the Reserve Forces, he had no doubt that when the Navy and Army were discontinued, they would show themselves well to the front. (Laughter.) The toast was coupled with the names of Sir John Reid, Director-General of the Navy Medical Department, Dr Crawford, Director-General of the Army Medical Department, and Dr Heron Watson, Surgeon-Major Q.E.R.V.B.

Dr Crawford, in replying for the Army, said that never had soldiers or sailors behaved better than they did in the recent most extraordinary and most valorous campaign on the banks of the Red Sea. The novelties of that campaign were striking; the results were no less remarkable. He supposed that the nature and character of the injuries sustained were almost unprecedented in modern experience,—the wounds being almost entirely sword or spear ones—something very unusual in military campaigns of modern times. It was with some pride that he was able to say that the surgeons (and as an old alumnus of this school, he was proud of the fact that so many of them were Scotch surgeons, including the P. M. O. of the expedition) had given a most admirable account of their wounded. They were now progressing most satisfactorily in the hospitals in Egypt, so much so, that the results would quite eclipse anything they knew of in modern military surgery. It was the first time they had been able to carry out Listerian principles in the field, and the results were quite as good as in the most favoured hospitals at home. In the previous campaign in Egypt their medical brethren did not get that credit which was their due. Yet the medical results of Tel-el-Kebir were superior to any that had been got in previous campaigns. One memory crowded back upon him — his last public dinner in Edinburgh. It was just thirty-seven years since he had the honour of dining with a body of gentlemen in this city. That dinner was at the Harveian Society. He congratulated the Society on one thing. They knew that the development hypothesis had made vast strides since that day. He had rarely seen this better illustrated than in the strides the Harveian had made. On the last occasion they dined in a hotel. On this occasion Harvey found his place in the Royal College of Physicians. None of them could feel other than proud that his name was honoured as it ought to be in this great institution of medicine.

The toast of the evening, "THE IMMORTAL MEMORY OF HARVEY," was next proposed, in a few appropriate words, by the President. Harvey, he said, was most commonly known by his discovery of the circulation of the blood. It was not so well known that he was one of our greatest "howdies," and had done more for the advance of scientific midwifery than almost any other man. At one time he was called jeeringly, the Circulator, at another, the Generator. It was he who first enunciated the doctrine that all living beings came from eggs—a wonderful discovery. His memory ought to be respected for that, if for nothing else.

Dr George Balfour proposed the "Science of Medicine"—a toast which, he remarked, almost took one's breath away, for it must have taken a genius to invent it, and it required a genius to worthily propose it. His period of studentship extended back to the time when to know which end of the stethoscope to apply to the ear and which to the chest was considered quite sufficient to enable a man to ding out of a parish in Scotland any less carefully taught rival. It extended back to the time when there were no microscopes in Edinburgh University nor in the Extramural School, when men were not sure that what they saw had an actual existence, or was conceived in their own minds alone; when, as he remembered, and this was a fact, that one of their most distinguished pioneers in microscopical science was supposed to have made many of his most magnificent discoveries by aid of a glass that was cracked, though some thought the crack lay elsewhere. Since these days the strides had been so immense, so vast that he could never attempt to go over even one of them. From time immemorial the practice of medicine was divided between the empirics and the dogmatists, but now the dogmatists had it all along the line. The science of medicine had a long and prosperous future before it, and he asked that the toast should be drunk, coupled with the names of Virchow, Mouat, and Fordyce Barker.

Prof. Virchow (who spoke in English), said that on the Continent, as elsewhere, they followed Harvey, and he was of the same opinion as the President, that not only the circulation was a great merit to Harvey, but also his investigations in the matter of generation. Certainly he had not a microscope, and could not see the ovum or cellule. He arrived at the knowledge of its existence by reasoning towards it. They lived in a curious time. During two centuries the circulation of the blood was the important doctrine on which the science of medicine rested. But now during their lives the cell-doctrine had become pre-eminent. At first the cell was only a morphological phenomenon, but after a time it began to act. It moved; it migrated; it made many actions out of the vessels; it grew in the tissues; it penetrated the whole body; it existed in all places in which any pathological local phenomena were developed. But now they had the bacterium coming to the front, and they were all going the bacteriological way, and the bacterium, it wanted to take the place of the cell. (Laughter.) For the cell was the great evil, the hereditary, the bad mater. It was the old acrimonia. Now, said the bacterium, "I am the old acrimonia," and they had the struggle between the cell and the bacterium going on, and they could not say on what side would be the victory, but they hoped on the side of the cells, and so they were on the side of Harvey and were resting in his ways; and they could say they were the friends of the Society, and they looked on all its members as their scientific friends. (Cheers.) Dr Mouat and Dr Fordyce Barker also suitably replied, the former gentleman stating that at one time he and the authorities of the Calcutta Medical College were anxious to have Virchow on the staff of that institution. If they had succeeded, he had no doubt that the cause and origin of cholera would have been discovered long ago, and they would not be searching for it at this late day. (Hear, hear.)

Dr Rutherford Haldane proposed "The Guests." One very good object attained by the Society was that it had enabled the town and country practitioners to meet together once a year. The annual meeting had proved a most admirable means for promoting a good feeling among medical men. As a rule the meetings of the Society were confined almost entirely to its members. On this occasion they were honoured by the presence of a number of distinguished guests. (Hear, hear.) They felt both proud and delighted that they had had the privilege of being the first to entertain these gentlemen on their arrival in Edinburgh for the celebration of the Tercentenary of the University. He thought they were particularly fortunate that theirs had been the first festive meeting at which these gentlemen had been present, for he thought it would be difficult for any one who went conscientiously through the programme of the next few days to survive. (Laughter.) He begged to couple with the toasts the names of the first magistrate of the first city in the world, the Lord Mayor of London, and of that distinguished savant, M. d'Abbadie. (Cheers.)

The Lord Mayor of London, who was received with loud cheers, said he regarded this honour as a compliment paid to the position be now unworthily filled, and he was sure his fellow-citizens would appreciate it as such. He regretted that he would not have the pleasure of being present at any of the festivities which had been alluded to; but speaking for the citizens of London, he might say that nothing could be indifferent to them which was of importance to the city of Edinburgh. He hoped that the feelings of friendship which always existed between the capitals of the North and South would continue to exist between the city of London and the city of Edinburgh. They must all feel that the occasion of the Tercentenary of the University of Edinburgh was a matter of the greatest interest to the whole community and to the civilized world. He was glad to observe that they were honoured by the presence of so many distinguished men both from America and the Continent of Europe. In congratulating the University on her 300th birthday they trusted that the past three centuries with their great successes might be the precursors of a yet more eminent career. (Cheers.)

The remaining toasts were—"Our Honorary Member," proposed by Dr Peel Ritchie, and responded to by the Rev. Dr Grant; "The President," proposed by Dr Kelburne King, and replied to by Dr Keiller; "The Vice-President," by Prof. Grainger Stewart, answered by Dr Heron Watson; "The Secretaries," by Dr Turnbull of Coldstream, who pointed out that the pleasant change from hotel to the hall of the Royal College of Physicians, which had been adverted to by the Director-General of the Army, was due to the energy of the Senior Secretary (Dr Gillespie); "The Coming Vice-President" (Dr Sanderson of Musselburgh), by Dr Heron Watson. "*Floreat Res Medica,*" was then proposed by the Chairman, and the company parted after a most pleasant evening.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Medicine at the sittings held on 5th April 1884, and were admitted L.R.C.P. Ed:—William Guy, Edinburgh; Harry Graham Smith, Edinburgh; Arthur Overton, Lincolnshire; John Thompson Tupholme, London; Thomas William Price, Birmingham; Adolphus Arthur Woodson, Sheffield; Jacob Robert Lucas Dixon, North.; Robert Fenner, Kent.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Surgery at the sittings held on 28th March and 18th April 1884, and were admitted L.R.C.S.:—Robert Henry Blaikie, Edinburgh; Skene Keith, Edinburgh; John Thomarson, Hawick; William Kirman Pauli, Luton, Beds.; Robert Smailes, Leeds; Kolapurvala Jamsetjee Framjee, London; Samuel Garland Sharpe, Manchester; Charles Gilroy King, Pollokshaws; James Charles Francis Whicher, London.

CORRESPONDENCE.

To the Editor of the Edinburgh Medical Journal.

DEAR SIR,—I am much indebted to Dr James Carmichael for his friendly criticism on my paper on "Scarlet Fever, how to limit its Contagiousness," because he has thereby enabled me to make my position stronger. In writing the article I had two objects in view,—one, to direct attention to the patient himself rather than to his surroundings; the other, to urge the desirability of anticipating the development of the contagious property of the disease by the early employment of disinfectants.

Taking up Dr Carmichael's criticism in detail, he objects to an opinion being given as to the best mode of neutralizing the scarlatinal poison, because we do not know what it is. We know, however, where it lurks, and by systematically treating the skin and throat with germicide remedies, we do the most the present state of our knowledge permits and enables us to do.

As to the second point, wherein Dr Carmichael takes exception to my statement that the disease first shows itself in the throat, and secondly in the eruption on the skin, I may quote Dr Gee, who says that in adults complaint is made of uneasy sensations in the throat before any rash can be seen on the skin. Even if it is admitted that in some cases the throat symptoms are later in their appearance than the cutaneous, or that there are no throat symptoms at all, my argument will remain absolutely unaffected. In some instances, it may be added, there are only throat symptoms and no eruption whatever.

Speaking of disinfection, Dr Carmichael says that he "believes that careful attention to ventilation and the use of such substances as permanganate of potass in solution, chloride of lime, and careful fumigation with sulphur, are most useful in rendering the air of the room innocuous." As to ventilation and its value in all cases there is no question, but one has merely to turn back a few pages to Dr John Duncan's article on "Wound Treatment without the Spray" to learn the value of efforts to disinfect the atmosphere. If a carefully directed current of highly carbolized watery vapour fails to disinfect the atmosphere in the immediate neighbourhood of a wound, are we to believe that the diffusion of a little of the substances named by Dr Carmichael through the air of a well-ventilated room will in the least degree neutralize the scarlatinal poison? To say they are most useful is to employ a vague platitude of no scientific value whatever.

In suggesting a solution of boroglyceride in glycerine as an application to the throat and anterior nares, I did not mean to exclude other valuable methods of treating occasional complications, such as coryza and post-pharyngeal catarrh, which Dr Carmichael has mentioned.

Dr Carmichael admits the value of unguents during desquamation in lessening the risk to other people, but thinks that patients so treated are more liable in consequence to nephritic attacks. Dr West, on the contrary, believes that patients so treated are less liable, and his experience is certainly ample. But there is no need to use an unguent; carbolized glycerine would act equally well, and would favour, or at least not in any way interfere with, the transpiration of watery vapour from the skin, as Dr Carmichael, I think quite unnecessarily, fears unguents would do.

Dr Carmichael seems to doubt the possibility of disinfecting the epithelial particles cast off during desquamation, and thinks the proof afforded insufficient. I selected the two cases quoted as good examples, but could have related many more. It has been proved possible to render a putrescent surface aseptic and to maintain it so by suitable surgical means, therefore, *à fortiori*, it is possible to prevent the scales which separate from the epidermis from becoming infective by early and persistent local disinfection. It is but a further illustration of a well-known canon in medicine, *principiis obsta*.

In conclusion, the value of the plan I have suggested will be mainly appreciated in country practice, where removal to an hospital is impossible, and even separation is often impracticable. It is therefore to my country brethren that I look more especially for corroborative proof of my thesis, and I believe I shall not look in vain.—Sincerely yours, W. ALLAN JAMIESON.

OBITUARY.

DR CHARLES WILSON.

THIS distinguished physician and estimable man died in his eightieth year on Wednesday, 19th March, 1884. Having retired from practice nearly twenty years ago, he was little known by the younger members of the profession, though he occasionally employed his learned leisure in contributions, generally anonymous, both to lay and medical journals. Our own pages have more than once been enriched by his labours.

Born in Kelso in 1804, he studied and graduated in Edinburgh, went to Paris, and in 1828 began practice in his native town, where he soon became a well-known citizen and practitioner. Fond of literary work, an enthusiastic naturalist, and a marvellous, learned, and accomplished linguist, he soon became a power in his own district, practised there with great success till 1854, when, retiring from general work in Kelso, after a study of his profession in Vienna, he settled in Edinburgh with a view to consulting practice. This he did not obtain to any great extent, but was one of the earliest founders of the Sick Children's Hospital. He was also much interested in the prevention of drunkenness and in the treatment of its consequences, and to the last carried on his studies in medicine and literature.

THE obituary notice of the late Professor Allen Thomson has been unavoidably postponed in consequence of the author's unavoidable engagements at the General Medical Council and the Tercentenary of the University of Edinburgh. It will appear in the June number.

Part First.

ORIGINAL COMMUNICATIONS.

I.—INTRODUCTORY ADDRESS DELIVERED AT THE INAUGURATION OF THE DEPARTMENT OF MEDICAL JURISPRUDENCE AND PUBLIC HEALTH IN THE NEW UNIVERSITY BUILDINGS, 1ST MAY 1884.

By DOUGLAS MACLAGAN, M.D., Professor of Clinical Medicine and Medical Jurisprudence in the University of Edinburgh.

GENTLEMEN,—It is, I believe, an open secret in the University, that I have no affection for what are called Introductory Addresses, and since the day when I had for the first time the honour to put on the professorial gown, I have, at the beginning of each succeeding session, contented myself with a short exposition of the objects of the course of instruction which I was about to deliver, and got as fast as possible into the proper business of the class. I would much have preferred following this practice now; but the circumstances of this day are exceptional, and I must therefore ask your indulgence whilst I say a few words specially applicable to the occasion. I feel that if I were not to do this, I should appear as if I were indifferent to three considerations which ought to weigh with me. First, there is the example of my Colleagues, each of whom has dedicated his new class-room by a few special words on the occasion of his first opening it; and it would ill become me to omit this duty when we have now practically completed the transmigration of the Medical Faculty from the old to the new University Buildings.

I congratulate the students of medicine in now having the whole lectureships in their Faculty transferred to this pile of buildings, at once so commodious in their internal arrangements, and in such proximity to that essential part of the outfit of a medical school, that important field from which they will reap the richest fruits of practical knowledge, our noble Royal Infirmary. Perhaps the law members of the class may feel that the locality is not so specially adapted to their requirements; but I think they will find some compensation for a little extra distance from the New Town in the greater comfort of the class-room. For myself, I may say that to me it is not merely a question of comfort, but a source of pride, to find myself at last in possession of a class-room which I can call my own, for that I have never enjoyed since I became a professor. It was not, I assure you, without a certain feeling of regret, which you will most probably call purely sentimental, that I have had to quit the old class-room in which I lectured and which I shared with my colleague the Professor of Midwifery. It is true that the reason for my quitting was not one tending to produce either regretful or sentimental feelings, because it was that from the growing prosperity of the Edinburgh School of Medicine, I had practically to use the words of the prophet and say, "The place is too strait for me; give place to me that I may dwell." It is true that I and my students had to ascend ninety-one steps to reach it, and that, being on the roof, it was like the Parisian's garret, which he described as the first flat in coming down from the sky; and it is true that it was lighted by a cupola through which, between eleven and twelve in June and July, the sun beat down on my head and threatened me with sunstroke, till my ingenious servitor rigged up a bit of green baize over me which saved me from the perils of insolation whilst it obscured my diagrams; it is true that it was a splendid example of the complete violation of the rules of ventilation and renewal of air, a pregnant clinical case of hygienic disorder, but it was the class-room in which I had listened to the prelections of two professors, where the lively and practical Hamilton had taught me obstetrics, where I had drunk in from Christison those instructions in Medical Jurisprudence which had so important a bearing on my future studies and professional predilections; and I was loath to leave the place where for some sessions I was privileged as a professor to address myself to the benches on which I had sat as a student. Will any one say that this is a bit of sentimentality which either I should try to exclude from my mind or you should sneer at? Of course I would have gained a considerable balance of consolation had I been able to find more convenient accommodation elsewhere in the old buildings, but that was more easily wished for than got. I tumbled downstairs to the Logic class-room, which was away from my laboratory, and was furnished with a lecture-table on which I could not conveniently demonstrate anything, and which class-room, sooth to say, was not much better ventilated than the place on the floor above, from which my audience had squeezed me out. But even this was not at all times at my command; and thus during this spring, when I gave an extra course of lectures for the sake of some students for whom it was a necessity, I was obliged to migrate to the other end of the quadrangle, into the premises of my colleague the Professor of Civil Law, and thus I was professionally in the condition of the gaberlunzie man in the ballad, who had "neither hoose, nor ha', nor hame." Do not think that I make this statement in a grumbling spirit, as if I had for twenty-one years been undergoing a sort of academic martyrdom, and as if the University had been to me a cold-hearted, hard-fisted stepmother. A very different conclusion has to be drawn from these facts. It is that the University has felt that in the teaching of medicine and other branches of science, professors are not nowadays to "read lectures," as the phrase went, but to teach; and this can only be done properly by processes of demonstration as well as prelection, for which the old class-rooms were not adapted.

And this brings me to the second reason why I should say a few words specially applying to the present juncture; that if I did not do so I might appear to be awanting in my recognition of the liberality of that generous public which has now placed my colleagues and myself in circumstances where we have not these disadvantages to complain of. Far from me be such indifference; far be it, and far is it, I am sure, from the heart of every one who is in any way connected with Edinburgh, either as a city or as the seat of the largest medical school in Europe. On the contrary, every such an one must stand astonished at the outcome of liberality which the neighbourhood in which we now are presents. It is a marvellous thing to think that within the short period of about fifteen years there should have been erected among us our splendid Infirmary, at a cost of £300,000, and these buildings for our Medical School, at a cost of £250,000,—all this the outcome of public liberality, with the exception of £80,000 granted by Government for the latter purpose. Not as if this had been done by Edinburgh though in Edinburgh. She could never have done the half by herself had it not been for the generosity of others who are not her citizens. But Edinburgh may at least be proud of this, that she has been felt to be the worthy recipient of such bounty. I am strong in the belief that public generosity will not stop here, but that the means will in due time be forthcoming to enable us to possess a college hall where our academic solemnities may be rightly performed, and which will lead to the completion of the new buildings in which we are now assembled. I cannot help availing myself of this opportunity of saying, how much I would rejoice if those who have the disposal of the fund which has been raised to erect a memorial to the late Duke of Buccleuch, could see their way towards acting upon the suggestion of Principal Shairp of St Andrews, that this money should be employed in the erection of this, which, under the designation of the Buccleuch Hall, would serve as a worthy record of that justly esteemed nobleman and true Scottish patriot, who was one of the most liberal contributors to our University Buildings Extension Fund.

This leads me up to the third consideration which has tempted me on this occasion to overcome my objection to special addresses, —it is that I might otherwise appear to be unappreciative of the talent of that accomplished gentleman to whose constructive skill we owe the admirable accommodation which we now enjoy in the shape of class-rooms, laboratories, and museums. I am not here to speak as a critic on a question of architecture, or to make an eulogium of Mr Rowand Anderson. His work is his eulogium. Edinburgh possesses many edifices which speak of the genius of Scottish architects. The Register House and the front of the old University Buildings tell of Robert and Thomas Adam; the High School (I walked as a High School boy in the procession of laying the foundation of it) immortalizes Thomas Hamilton; the Royal Institution, the National Gallery, and Donaldson's Hospital embody the genius of William Playfair; the Scottish style stands conspicuous in the Royal Infirmary of David Bryce—and worthy to be placed in the same category as these, is the example of classical Italian which at the quartcentenary of the University will be the due monument of the taste and skill of Mr — let me rather give him his recently conferred academic title—Dr Rowand Anderson.

Gentlemen, there is another consideration which leads me to embrace this opportunity of uttering a few special words. I am now the oldest member of the Faculty of Medicine in the University. Alas that it should be so, and that during recent years so many—a few my seniors, not a few my juniors—should have fallen on the right hand and on the left. It is my duty to acknowledge, with all humility, I trust with all sincerity, my thanks to God for having spared me to inaugurate this new class-room of Medical Jurisprudence and Public Health. I do so humbly, but unhesitatingly, for I am too confident in the good taste and feeling of our students of medicine to fear that any of them will ascribe my doing so to a desire to pose as one of a specially reverential or devout frame of mind.

But it is time that I were remembering that what I am now saying, be it special or be it not, is introductory to a course of lectures, and let me therefore say something as to what is meant by Medical Jurisprudence and Police. It is an old-fashioned phrase, but it is the official title of this chair, and it is that by which it is designated in my commission as a Professor. It may be more briefly and not less correctly described according to the expression used in Germany as State Medicine (*Staats-Arzneikunde*), and may be defined to be the application of the science of medicine to the maintenance of public order and of public health, there being thus constituted two distinct branches into which the subject is divided.

Remembering that this class consists of students of law as well as students of medicine, I would say to them that the department of Medical Jurisprudence is important for them both. Perhaps law students may not see that there is much professional interest to them in the department of Public Health, it seems to lie more purely in the domain of the medical man aided by the engineer. But I may remind them that within the last thirty years about ninety Acts of Parliament directly connected with public health have been passed by the Legislature, though many of these have been abrogated by subsequent amendment Acts, that there are plenty more in prospect, and that so many laws cannot be on the statute book without furnishing more or less of employment to the members of the legal profession.

Some confusion has arisen from the variety of designations that have been applied to our subject. In his treatise on Medical Jurisprudence,—a book, however, now out of date, written for the use of lawyers,—Mr Chitty, barrister-at-law, uses Medical Jurisprudence as synonymous with State Medicine, and he divides it into Forensic Medicine and Medical Police. Forensic Medicine he defines as being "the evidence and opinions necessary to be delivered in Courts of Justice relating to criminal and other matters to be there determined," and Medical Police to be "a consideration of the policy and sufficiency of legal enactments and regulations for the purpose of preserving the general health and physical welfare of the community." This last is too much of a lawyer's definition, and seems to shut out of view the fact that Public Health, or to use a single word, Hygiene, is an important part of the daily work of the medical profession, though perhaps the definition is applicable enough to the old-fashioned term Medical Police.

The term Forensic Medicine I dislike, although it has been used as the title of books on Medical Jurisprudence, such as the useful manual of Dr Guy of London, and although it is the Latin title of this chair, and that by which I have to designate myself as a signatory to your diplomas. But it should be borne in mind that the duty of the medical jurist is not merely to throw light upon questions which have come into Courts of Law, but, in many instances, both criminal and civil, by results of his investigations to show that there has been no crime or civil injury, and thus to prevent the matter from becoming forensic at all. Perhaps this consideration, however, may not enlist the deepest sympathies of the law members of the class. The best designations to my mind are State Medicine as a general term, subdivided into Medical Jurisprudence and Public Health.

In what estimation are these departments of knowledge held in this country by the Legislature and Government, by the learned professions, and by the public? I think that in regard to public health there need be no dispute that all these parties take a lively interest in it. The existence of the Local Government Board, whose special duty it is to look after all hygienic matters, and which is presided over by a minister of cabinet rank, the numerous Acts of Parliament passed in relation to public health, the journals devoted to this subject, the museums which have been formed to illustrate it, the popular lectures which have been given to bring it home to the public mind,—especially to bring it home to the working classes who most stand in need of its beneficent aid,—the desire of many medical men to obtain certificates of special acquaintance with it, are ample testimony that in all quarters—governmental, professional, and popular—no one needs to expend breath in urging the importance of public health on the attention of the nation. In truth, I am almost disposed to think that a little repression of enthusiasm will soon in some quarters be called for. Far be it from me to throw cold water on the efforts made to improve the sanitary condition of the country, especially in the dwellings of the labouring classes, but I think that I observe a disposition in some people to rush into extremest views as to what may be injurious to the community; and what I fear is, that when it is found that a huge number of hygienic evils have been laid before them, which they discover not to be realized, there may be a reaction, and the people become indifferent to the true warnings of hygienists. We have enough of gigantic hygienic evils among us to engage our fullest attention and to call for our fullest efforts, but we need not conjure up imaginary mischiefs, and frighten people into fancying that there is nothing but death and disease around them on every side. It is a pity, because a skilful and enthusiastic chemist finds infinitesimal traces of lead or copper or tin to be contained in preserved green peas, that people should be frightened to eat them if they care for them. It is a pity that because a perhaps precocious child, generally a delicate subject, dies of cerebral disease, that people should rush to the conclusion that we should abolish the Education Code—of which, however, I am not called upon to be a defender. Let us beware lest by giving undue importance to minor evils we increase the number of these people who exist in the world, who, as was cynically said, are afraid to live lest they should die.

Hygiene is not a new science. It is now two and a half centuries since Bernardino Rammazzini wrote his book *De Morbis Artificum*, but hygiene has now waked out of a long sleep, and all that I desire by these remarks is to express the wish that in its new career it may not, like vaulting ambition, overleap itself and fall on the other side. Modern hygiene is an enormous public benefit. It has even in the course of the existing generation done immense good in spite of the yet too great prevalence of mortality from preventible causes, and it gives legitimate employment and emolument to a considerable number of my profession, by numerous appointments as Medical Officers of Health. Publicly, as well as professionally, more good would be got were something done to enlarge the areas of the work of these functionaries, and thus by offering larger salaries more readily induce highly qualified men to devote themselves to it; and hygiene suffers greatly from the permissive character of much of the legislation concerning it, from the presence in Acts of Parliament of the word "may" where "shall" ought to be used. Let hygiene be cherished by all means,—public, private, and personal,—but not by that process of motion without progression which consists in riding a hobby to death.

But if Hygiene stands in no need of requiring more fostering in governmental, professional, and public quarters, I fear I cannot say the same of Medical Jurisprudence. It appears to me to have had too much of the cold shoulder shown to it at all times up to the present. The Professorship, the duties of which I now discharge, is an illustration of this. It was in the year 1794 that Dr Andrew Duncan, sen., urged upon the public authorities the importance of instituting a Professorship of Medical Jurisprudence, and it was not till thirteen years after that such a step was taken by the appointment of the learned Andrew Duncan, jun., to this chair, which was the first professorship of Medical Jurisprudence ever created in the United Kingdom. Let us inquire how it now stands in the estimation of the Government, the learned professions, and the public.

The Legislature, so far as regards passing Acts of Parliament, has not of late years concerned itself much with Medical Jurisprudence, although a good deal has been said, though little done, as regards the improvement of the criminal law with which Medical Jurisprudence has important relations. But with the executive department of Government I have a large crow to pluck. The public authorities gladly avail themselves of the aid of Medical Jurisprudence, especially in carrying on the work of our criminal law. What encouragement does it give to members of the medical profession to make themselves fit for rendering that aid efficient by giving careful attention to it? Does it, for example, call upon us doctors to the extent it ought to do, in cases of sudden and unexplained death, to make proper investigation, or even to make such general inquiries, not of a profound kind, as ought to satisfy the public mind? Does it not too often leave this to be done by a police constable, and depute to him to furnish an opinion, on the strength of which a lacuna in the register of deaths may be filled up? How does it recompense medical men who are cited as necessary, but perhaps unwilling, witnesses to leave their practice for a day to bear testimony in a criminal court? It asks me to go from Edinburgh to Inverness for this purpose, and bestows upon me the liberal honorarium of £2, 2s. a day, but in all honesty let me say that it allows me first class railway fare. From what I see every week in the newspapers I am persuaded that many cases annually occur where a post-mortem examination ought to be made, but where nothing of the kind takes place. Do not suppose that I apply these remarks specially to Scotland, I apply them to the rest of the kingdom as well. Do not think that they are meant as a hint that our system of investigation into unexpected and unexplained deaths requires to be altered, or that I have any wish to see the coroner and his inquest brought north of the Tweed. Upon this matter my views are decided; but as I had an opportunity some years ago of expressing them before an English audience at a meeting of the British Medical Association, I need not refer to them now. Our Scottish system is excellent, but the application of it is defective. Why is this? It depends entirely upon the niggardly official spirit which grudges a few guineas yearly for making our system of investigation more thoroughly efficacious.

It happens that this country is not alone in having to complain of this parsimonious spirit. We are rather ill off here in all conscience, but not so bad as elsewhere. I have been reading in two recent numbers of the *Annales d'Hygiène* a remarkable report made by Professor Brouardel of Paris to the Société de Médecine Légale of France, in reference to a Bill now before the French Senate in regard to medico-legal investigations. Dr Brouardel, among other deficiencies in France, complains that there is a want of sufficient instruction of medical men in the methods of making medico-legal investigations, such for instance as post-mortem examinations, and the conducting of microscopical and chemical medico-legal researches. We have no need to complain of this in our British schools of medicine generally, and certainly not in Edinburgh. The post-mortem theatre in the hospital, if duly attended to, and this I urge most strongly upon you, will readily teach you to make a judicial dissection, which does not differ essentially from that for inquiring into the pathology of disease, except that in the judicial case the whole body must be examined so as to avoid the possibility of anything being overlooked; and the valuable classes of practical physiology and pathology will enable any one who chooses to avail himself properly of them, to make all necessary microscopic examinations. All these, any man holding a degree from this University ought to be able to perform thoroughly, even if he be busily engaged in the ordinary practice of his profession. I make some reserve as to chemical investigations, such as those in the department of toxicology. A practitioner has no means of doing this satisfactorily; it would be a very bad investment of money to fit up a chemical laboratory in his house, and the returns from it, very few and very far between, would not pay the interest of his expended capital. You will do wisely in handing over such researches to the chemical experts at the medical schools; but all of you ought to be ready, on the score of your medical, surgical, obstetrical, and pathological knowledge, duly to examine and report upon a living person, who has been injured or violated, or on the body of one who has been suspected to have died by violence of any kind. It may be that some of you have a liking for such chemical investigations, and would wish to acquire some experience of them. If so, your want can be supplied. There will soon be completed upstairs a commodious laboratory specially set apart for the use of students, and arrangements will in due time be made for instruction of those who desire to avail themselves of it. Do not fancy that from this I have any intention of thrusting into the list of necessary classes a compulsory course of practical Medical Jurisprudence. The using of this laboratory in this respect must be voluntary, but it is more especially intended to be available to those who wish to take the Science Degree in Public Health, and who are required to do three months' work in a laboratory, and whom my colleague, the Professor of Chemistry, willingly cedes to me, as being more properly inmates of a State Medicine laboratory than of one devoted to pure scientific chemistry.

But pardon this digression, which has led me away from the remarkable report of Dr Brouardel which I quoted to show that want of due encouragement to the study of Medical Jurisprudence is not confined to Great Britain. I have told you that you need not look to it as a source of emolument, but if it will be any consolation to you to know that there are others as ill off in this respect as ourselves, you may get it from France. What do you think of such a tariff as the following, which is the one actually in operation in France:—For a post-mortem examination in Paris, 7s. 6d.; if in a town of 40,000 inhabitants or more, 5s. 10d.; if in a less populous community, 4s. 2d. For a visit and report in Paris, 5s.; in towns of 40,000 inhabitants, 4s. 2d.; in smaller communities, 2s. 6d. For being taken away from his usual duties (I presume this means working in a laboratory or going to the country), 1s. 8d. a day if in Paris; 1s. 3d. in a town of 40,000 and upwards; and in smaller communities, 10d.; and about 4½d. a mile when going to a distance. You may say, that although we are not so wretchedly paid in Britain as in France that I am by such statements discouraging you from paying much attention to Medical Jurisprudence. It is not so. The value of any branch of our profession is not to be estimated by the mere direct fees which it may produce. Nobody will say that Medical Jurisprudence is of as much practical importance to you as medicine, surgery, and midwifery, but you ought to bear in mind that although not so directly profitable to you it ought to receive your attention, because it stands in this peculiar contrast to the other practical branches of our profession, that your engaging or not engaging in it does not depend upon your own will. You may be compelled to practise it *nolentes volentes*. You may abjure obstetrics if you have a special predilection for pure surgery, or *vice versa*; you may decline to attend parturient women, but if you have by any chance been brought into contact with a case which becomes surrounded with elements of suspicion and leads to judicial inquiry, a coroner or procurator-fiscal may summon you on the part of the public authorities to give evidence, and this you cannot refuse. Be prepared, therefore, for such contingencies, and remember that, whether you are adequately paid or not, you owe something to your country, to your own reputation, and to the University from which you emanated. To your own country, as good citizens, you owe it that you should be ready to throw that light which a medical man alone can throw on questions which involve the administration of justice, or what is more agreeable still to the medical jurist, to ward off evil suspicion or unfounded accusation from the innocent. You owe it to your own reputation that you should be able to appear before your fellow-citizens, not as mere routine practitioners, but as men well versed in all the branches of medical science; and let me say that a properly reasoned report, a good appearance as a witness in a criminal court, a clear but modest statement in your examination-in-chief, your being able to hold your own under a smart cross-examination, a ready reply to some important question put from the Bench, and possibly a word of compliment from the presiding Judge on the value of your evidence, may place you in a position of estimation among your fellow-citizens to which you might not attain till after many years of faithful and laborious work as a practitioner. Remember, further, that you owe something to the school from which you have emanated. You are bound to see that a want of attention to Medical Jurisprudence, or indeed to any other branch of your profession, does not lay your *Alma Mater* open to the aspersion of sending into the world imperfectly qualified medical men. Remember that upon you, as present students and future graduates, rests the responsibility of maintaining the character of the University of Edinburgh.

If ever there was a time when this ought to take hold of your minds it is now, when we have just concluded the celebration of her tercentenary; and as I am the first Professor who has spoken *ex cathedrâ* since that event, I may be permitted to say a few retrospective words concerning it.

We are all, I think, entitled to congratulate ourselves on the complete success of the whole of our festival, but I beg more especially from the heart to congratulate you and your fellow-students on the great reception which you held on the morning of Friday, 18th April. I do not forget the solemn impressiveness of the service in St Giles; I do not forget the brilliancy of the great honorary graduation, with its picturesque assemblage of varied academic costumes; but I felt at the time, and say now, that nothing produced in me a profounder emotion than to see so large an assemblage of students in the presence of so large an assemblage of men of world-wide renown. It is something that all of you may be proud of to be able to say that you have looked into the faces of so many great men. I am sure that you will think with delight of this many years hence. I judge from my own experience of a single event which has always been a well remembered one in my own personal history, that when a youth, barely escaped from my teens, I had the rare privilege at Weimar of seeing and conversing with the greatest German of his day, the then venerable and illustrious Goethe. I like to talk about that still; and I can fancy many of you, in days yet distant, telling, perhaps to a second generation of your descendants, how pleasurably you look back on having seen not one but many of the foremost men of the world. But you enjoyed something more than merely seeing them. You heard them speak to you weighty words of wisdom. It was something more for you to hear the words of encouragement from the brilliant and eloquent Russell Lowell. It was something more for you to hear the address of Professor Beets, which showed you that the native of one country may admire and appreciate the land and people of another nation, and which ought to eradicate from you, if you have any germ of it within you, that insular prejudice of which some people accuse us, but to which I tender a plea of not guilty on behalf of educated Britons, for it is among the ill-educated that this stupid feeling prevails. Show by overcoming all insular prejudice that you are educated gentlemen. It was something more for you to hear Lesseps tell of the labours connected with that wonderful canal through which not a few of you may sail in carrying your professional acquirements to the service of your Queen and country in distant India. It was something more to hear that many-sided man Virchow—pathologist, anthropologist, archæologist, and politician—lecture to you on evolution and anthropology, with a valuable warning against rash speculation, and a strong injunction to rest upon well-ascertained facts,—a warning, by the way, specially applicable to the subject of Medical Jurisprudence. It was something more for you to hear Helmholtz relate how from a simple practitioner of medicine he raised himself to the position of the foremost physicist of the day. It was something more for you to hear Pasteur encourage you to work and persevere—words which could not form a motto more appropriate to any one than to the man who spoke them. It was something more for you to hear Count Saffi, the representative of the oldest university in Europe, the triumvir who, with Mazzini and Garibaldi, held Rome against a foreign army, speak to you of the relation that subsists between religion, patriotism, and science; and though last, not least, it was something more for you to hear the great political economist and publicist, Laveleye, tell you that, beyond the comparatively limited scope of your professional duties, you ought to have some thought for the great public questions of the day, to have an eye to regard and a heart to feel for the social miseries of the less fortunate of your fellow-creatures, and to take as your guide the solemn words of our Saviour, to seek first the kingdom of God and his righteousness, so that all other things may be added to you.

Gentlemen, it was a great privilege you enjoyed on that memorable occasion. I trust and believe that among the students of the University your tercentenary meeting with our guests will not become merely a memory of a brilliant day, but that it will continue to be an active leaven, leavening the whole lump. I trust and believe that it will make you feel more than ever how incumbent it is upon you while you are students to pay earnest attention to every department of professional knowledge, and faithfully to prepare yourselves for the duties of practical life, and for maintaining untarnished the reputation of our *Alma Mater*.

II.—REMINISCENCES OF THE MEDICAL PROFESSION IN EDINBURGH FIFTY YEARS AGO: BEING THE HARVEIAN ORATION, DELIVERED AT THE ANNUAL MEETING OF THE HARVEIAN SOCIETY, 14TH APRIL 1884.

By the President, ALEXANDER KEILLER, M.D., F.R.C.P.E.

(*Continued from page* 991.)

TIME forces us to hurry on to other reminiscences than those connected with operative surgery, towards which our thoughts and hopes were very early attracted (as often happens to the juvenile spectator of bold and cleverly executed though bloody exhibitions enacted in surgical theatres for the benefit of suffering humanity); but having said so much about our own masters, Liston and Lizars, we must speak further, though briefly, of Syme and others, of whose special merits we have also a lively and admiring recollection.

'Twas upwards of fifty years ago when the surgical struggles we have referred to were raging high, and when Lizars, backed by Liston (who did not offer himself as a candidate), beat Syme by a single vote, in securing the appointment of Professor of Surgery to the Royal College of Surgeons, when Syme so characteristically the more determinedly stuck to and successfully sustained his previous independent action in his own originated "Minto House Hospital," the singular history and wonderfully achieved records of which prove not only how much can be accomplished, even under difficulties and drawbacks, by individual effort when willing resolution and required ability are perseveringly associated, as these certainly were by Syme during his steadily observed and onward course, not only towards ultimately securing his richly deserved fame, but his long felt and increasing desire for a reconciliation with the too long estranged Liston, who, several years before his death, generously bethought himself of writing a friendly note to Syme, something to this effect, "Here is a surgical figure for you, I am not so bad as you believe me to be, write and tell me that you really wish to have our grievances and sores not plastered up but cicatrised," and which we need scarcely say was duly reciprocated so as to put an end to all hostile feelings between them, and admit of their mutually agreeing, not only to shake hands, but in doing so to shake off the old sticking and irritating plaster of animosity, and allow the underlying unhealthy cicatrix to afterwards firmly consolidate. This pleasant occurrence took place in 1839, and at Liston's unlooked-for death from aortic aneurism in 1847, Syme was offered and accepted the vacant chair in the University College, but only cared to remain in the world of London for five months, when he was glad to return among his old welcoming friends and favourite flowers in "Auld Reekie," before the chair he had there so recently left was otherwise disposed of.

Syme established for himself a world wide fame during his long and honourable occupancy of the Clinical Professorship, and Ferguson, who followed to London, proved himself "one of the first surgeons of the first city in the world;" and in speaking of our deceased first class surgeons we must not forget to refer to James Duncan and Richard M'Kenzie, both of whom were men of unquestionable surgical mark in our Royal Infirmary. They were great friends, and both, strangely enough, were cut down by the same destroyer cholera: the one when on the morning after the battle of the Alma he was attacked, and, to the sorrow of his many friends and admirers, never returned to occupy Sir George Ballingall's chair, that of Military Surgery, the better to prepare himself for the duties of which induced him to accept an appointment in the Crimea; the other, when on a temporary visit to the Continent, to rest from the fatigues of his immense general practice, his well-remembered and apparently robust frame, to the sorrowful regret of a large circle of friends, rapidly yielded to that terrible disease. James Duncan was a special favourite of Liston's, for whom he had the utmost regard; he was Liston's pet house surgeon in the Infirmary here, and followed him to London to join him at University College Hospital, and afterwards, while acting surgeon in the Infirmary here, proved himself to be, as he was sometimes called, "another Liston."

With regard to the SURGERY CHAIR of the University during the period which we have been surveying, in 1836 Sir Charles Bell, whose name was fitted to throw lustre on any school, and who was an ardent cultivator of surgery as well as renowned for his physiological researches and discoveries in the nervous system, was tempted to accept the chair, and which he occupied until he returned to London, when J. W. Turner was appointed, and after him, in 1842, the popular and eloquent James Miller ably for twenty-two years, and at his death in 1864 was succeeded by our late greatly esteemed friend James Spence, whose powers as a successful surgeon could scarcely be excelled.

To contrast the surgery of the past with that of the present might prove not uninteresting on this occasion. To compare the now with the then, those who (even less than half a century ago) have either witnessed or practised the surgery of the past with its obvious disadvantages, and more than obvious pains, and often too obvious penalties, must almost necessarily be the best able to appreciate and to laud the extraordinary surgery of the present, and its extraordinary advantages, especially in the extraordinary freedom from sore pains, if not also sorer penalties of the older as compared with the newer system of operative procedure.

It would not be difficult to depict the difference, and having witnessed and measured both the old and the new, alike in medicine and in surgery, we might readily enough manage to do it, did time permit.

We cannot pretend to go so far back as the days and deeds of boiling pitch or the flaming irons of the famous Spanish physician Albucasis, who wrote of burning cauterization with the utmost veneration, and spoke of "the divine secret virtues of fire surgically employed," from having found it efficacious in more than fifty diseases. But although we might refer to some things savouring of the fiery type we have seen used, which seemed almost to match those had recourse to during the 12th century, and although there seems to be some revival of the burnings and cuttings we used to see done even without any pain alleviator like chloroform, we avoid entering into particulars as to the unavoidable tortures of operative surgery fifty years ago, and prefer the more agreeable task of referring to the modern comparatively harmless, and much more heavenly manner of dealing with suffering humanity when requiring the knife of the surgeon, or to be at other times relieved from the dread of unbearable pain.

The surgeon's knife has long since then been shorn of its mental horror and bodily torture, through the blessings of anæsthesia, by which comparatively recently achieved unconscious and painless stillness on the part of the patient, the head and hands of the modern surgeon are so greatly relieved from the chance of disconcert and tremor, otherwise so apt to betray themselves, especially at a time when he knows, or at least fears, how closely his general placidity and readiness of purpose, not to speak of hand, are by many eyes staringly watched. In this respect the old operating theatre of our young student days afforded a comparatively dreadful appearance, for what with the entire absence both of *anæsthetic* and *antiseptic measures* which the surgeons and their patients had then to struggle against, their work and its results could only be performed and attained at a mighty disadvantage when compared to recent improvements in surgery and more modern appliances, for which our modern surgeons, modern patients, and modern students may well thank their stars.

If Albucasis, after lying peacefully in his grave for seven or eight centuries, could only have his dust sufficiently swept up and kept up, with any degree of intelligence, even for a single day, to enable him to witness the application of his divine remedy *fire, without pain*, in the form of the thermal or other blessed cautery, there cannot be a doubt as to his bones (if any such there were of him remaining) ever afterwards resting in peace.

We have often wondered what our own old company of surgical performers would think of the new, or how they would, if they could, stare at our modern ongoings. We can fancy Liston watching those (who in his day were not even calculated to appear within the womb of time) practising Listerism—a system which he would certainly have been the last man to discourage, because of its cleansing, and if in no other respect purifying of surgical surfaces which he himself did so much about fifty years ago to bring about in operative surgery—and the treatment of wounds and sores by simple water instead of ointment dressings,—a change which we saw Liston introduce, and with which his name ought always to be (as it usually is by those who know the fact) honourably associated.

Previous to Liston's masterly observation as to the importance of keeping raw surfaces as clean and as free from all sources of irritation as possible, the filthy system of plastering them over with ointment dressings generally prevailed; and, as those who are ancient enough to have witnessed, the fact of the principal work of the hospital "dresser" being that of spreading ointments by means of large spatulæ from out of the big greasy pots which, with the required bundles of lint, occupied a prominent position on the "dressing table," which, by the way, was then the most important piece of furniture in every surgical, as was the table covered with the too often filled bleeding cups in every medical, ward.

This filthy ointment system was superseded through the more cleanly, and therefore more salutary method of pure and simple water dressing, which we shall here venture to call "Listonism," because the word sounds precious like that of "Listerism," whatever the shade of difference in the principle of the practice may be ultimately proved to be. We know that some go the length of asserting not only that cleanliness, generally speaking, is next to godliness, but that surgically speaking it tends so closely on the heels, if not immediately before the toes, of operative success, as to justify them in denying the necessity for having recourse to the play of steam producers or spray of germ reducers; but as this remark is not intended to go beyond a mere stage whisper, we had better back out of it before it leads us under a cloud of bacteria, or so-called micrococci, the downpour from which might so disturb our present dream of our old master Liston, as to waken us up out of humour to fully comprehend, and thoroughly follow our comparatively young and much esteemed friend Lister in his advanced and successful efforts against germs, and which have, in these modern times of micro-organism and antiseptic attraction, so completely revolutionized the surgery of the world, and, along with it, immortalized his already renowned name, as not only to follow up the banishment of the old-fashioned beslieved and aproned surgical dressers, with their ointment-pots and pus-collecting tankards, but to scientifically heal up wounds by the first rate "first intention," that of timeously intercepting and steaming, or otherwise stamping out, the old micrococcial mischief-makers, and until recently unsuspected, because concealed, pus-factors, the discovery and due stifling of which operative Listerism, and its associated antiseptic dressings, have so completely changed for the better, not only the appearance and odour of our operating theatres and surgical wards, but the all-important object of their necessity, viz., the sanitary welfare of their patient inmates.

But there are other, and perhaps more striking, evidences of surgical progress, or rather operative change, than those we have yet referred to, for nowadays surgical deeds are not confined, as of old, to those of lopping off useless limbs, extracting stones from bladders, passing ligatures around bloodvessels, removing unseemly or dangerous-looking lumps, excising used-up joints, or other feats of manipulative dexterity, the successful performance of which the stars in our operating theatres are usually so enviously stared at and so heartily applauded for. There are more modern and deeper deeds which observation and practice have more particularly brought about. In comparatively recent years there has been a wonderful extension of operative surgery towards the internal regions of the body, and especially the serous lined cavities, all of which are now very differently looked upon, so far, at least, as considering the opening and handling of their shut sacs with dread, or as if the doing so were a lethal, if not criminal, procedure.

How different an aspect, for example, does the peritoneal bag now present from what it did to the surgical eye and hand of anything like fifty years ago, when to touch it even with the prick of a pin, and, far more, by the accidental or intentional cut of a knife, was thought almost akin to death, because of its supposed combustible and dangerously inflammatory nature. It would now appear that, so far from being so readily set fire to, the peritoneum can withstand almost any amount of handling, cutting, tearing, or tying, and which we now witness during the now commonly successful operation of ovariotomy,—not to mention the likely to remain uncommonly unsuccessful feats in "abdominal surgery," far beyond the safe removal of ovarian tumours, even by the barrel, bulk, or hundredweight—we refer to the extraordinary feats of desperately daring surgery, viz., the extirpating of kidneys and spleens, and gall-bladders and wombs, and, indeed, almost every other blessed, because naturally situated, belly viscera, as if there was really no original occasion for their absolute necessity.

The crowning evidence of advancement of surgery in recent times is certainly that of overcoming, by practically setting at naught, the too long continued blindness of surgical teachers in regard to the liberty that can be taken with their old "Bogey"—the peritoneum—which they left even to "howdies" and so-called "gynecologists" to practically prove that all their fears regarding the gun-cotton or dynamite nature of the peritoneal sac were groundless, and that they may not be at all afraid either of themselves, or it being so easily blown up, or so readily injured by the scratch of a knife, as their now old-fashioned notions inculcated—seeing that it may not only be freely opened, but freely handled, even to being cut and torn to tatters; not only roughly twisted, and squeezed, and ligatured, but copiously soaked, and sponged, and washed, and tubularly drained, to rid the cavity of septic exudation, and keep the blood from being injuriously contaminated, all which has recently been often successfully accomplished.

What could our old surgical masters have said to this wonderful change so as to justify the teachings they one and all taught, unless perhaps what some may possibly imagine they were entitled to say, as others have since done, in regard to the notorious bleeding revolution in medical practice, viz., "A change of type," which had so transformed the peritoneum into a sac so little given to kindle into a fatal flame when touched, that it has been recently proposed, if not actually proved by direct experiment, that it might be usefully employed as an avenue through which medicines, even of a stimulating character, could be safely introduced into the system, and consequently has come the suggestion that the *intra-peritoneal injection of iron* (in the form of the albuminate) might be adopted for the treatment of chronic anæmia!

The changes and improvements during the last fifty years in medical as well as in surgical practice have been manifestly great, and some of which we may briefly refer to, and especially as they may be supposed to go farther back than the period we have selected for remark. We now think of our early bleeding days, and even those when auscultation was in such a general state of infancy, and its development so slow and insecure, that comparatively few pretended to know its strength beyond carrying a stethoscope about with them for appearance sake, so as not to seem behind those who talked as if some instructive sounds might be heard through the then comparatively new-fangled and little-used perforated piece of wood, which nowadays so readily detects the faintest and innermost of sounds, the diagnostic revelations of which some exceedingly cute ears—when void of the doubtful acumen of over unctuous cerumen—never by any chance fail to immediately discover.

We remember the time when instructions on percussion and the stethoscope were first given in this city, not in the Infirmary, nor even on human beings, but in a small lecture-room in the High School Yards, on dogs, etc., the then teacher being Dr Robert Spittal, who had just returned from Vienna, puffed up with the windiest aspirations regarding auscultation, immediate and mediate, and that at a time when the names and achievements of Avenbrugger, Corvisart, and Laennec were fresh.

But it is to the very remarkable change in practical medicine during the time of which we now speak, viz., that connected with bloodletting, we must here refer, for in these days when not a drop of human blood is ever withdrawn that can possibly be saved, and not a willing drawer of the vital fluid is to be heard of, surely our now living hospital physicians and others are fairly entitled to ask, What in the name of wonder induced our medical predecessors to employ bleeders and cuppers in order to cure, or rather to settle, the condition of their patients, by determining the correctness of their own diagnosis and the justifiability of their treatment from *the buffy coat and cupped* appearance of the almost daily extracted blood? The only answer we can give (in the absence of the many, and even mighty, we do not say guilty, dead) is that bleeding was then the fashion, and, like all other fashions, it was liable to change according to the required type, and which, perhaps, is a good enough answer provided those who deign to ask such an ancient query are good enough to accept it.

What we ourselves then did, and were taught to do, and fully believed in regard to this old and bloody matter, may be gathered from the following avowal, which, in thus confessing, may possibly give us some relief, and do nobody any particular harm at this late time of professional day.

We were licensed, perhaps not thereby necessarily qualified to practise, in 1833, and even for several years before then enjoyed a large, although the reverse of a lucrative, practice in the fashionable parts of the old town, respectively known as the Canongate, Cowgate, and West Port, in almost every close and stair of which we had grateful as well as gratis patients, many gallons of whose half-starved blood we used to rid them of, for our lancet, in those universal depleting days, was seldom out of our hand, as we seldom thought of any mode of treatment beyond bloodletting to begin with, and afterwards to be repeated as often and as long as our patient patients could stand it. We were proud of our bleeding powers, and generally had pupil assistants to take lessons, and to see what a great don or rather mighty *dab* we had become by the constant practice of this our favourite operation, which we commenced even before attending a single lecture, beyond listening to the observations of one of the medical officers attached to the New Town dispensary (then located in St James' Street), who was always a noted bleeder, and from whom we learned this way to kill as well as to cure.

In our young days, and for long afterwards, the practice of bloodletting by venesection and cupping, not to speak of leeching, was almost everywhere by everybody and on everybody had recourse to, few men being allowed to run even the risk of inflammation in their head, chest, or belly, or indeed anywhere else, and no woman being permitted to venture, especially through her first pregnancy and parturition, without at least one, if not several, bleedings, and which general, gynecological, and obstetric practice we were early taught and, we fear, much too often adopted, as the change-of-type period had not yet arrived, when our pocket spears could be as safely, as they now generally are, turned into vaccinators, our bleeding vessels into drinking-cups, and our cupping machines into mere archæological specimens.

We have often thought that it would prove a not uninteresting statistical record, were the losses of human blood through the lancet of the healing art and the sword of the killing art respectively ascertained and duly tabulated, but, now that we have got rid of the old bleeding diseases through the improved "change of type," we had better here and at once throw overboard the "*fount*" of *old types* we are now referring to, in case our "compositor" may be induced to set them awkwardly for public print, and for which needless risk of vituperative exposure there is now no very special occasion.

On looking over what we have penned regarding the scientific and practical progress of the present compared to the past, we find there is much still required to be in fairness said regarding a power without which operative surgery would indeed be a painful exercise, and many an otherwise sorrowful agony, which it is so admirably fitted to soothe, would go unrelieved,—we, of course, refer to the anæsthetic power of CHLOROFORM, which cannot, and ought not, to be lost sight of, or in any degree diminished, even in these attractive bacterian and unusually engrossing antiseptic times, when the steaming away of carbolic spray from out of the novel engines exhibited in our surgical hospitals is so apt to conceal the greater, if not more curatively required, wonder, which leads us so to speak of it, as first to say that the time was when surgical patients were led into the generally crowded theatre almost like sheep to the slaughter, and quite consciously laid on, if not tied to, the operating table, there to bear (without the soothing influence of even the slightest æsthetic balm) the fully exposed and freely applied knife of the surgeon, whose painful duty is nowadays removed through the blessed nectar of anæsthetics, the introduction and use of which have so entirely changed the whole aspect of our surgical theatres and operative treatment, as to no longer engender nor necessitate even discomfort either to the patient or the operator, the former being now usually sent to sleep through the delightful influence of chloroform, and so carried into the surgical theatre, and there unconsciously and coolly operated on without undue haste or anxious flurry, and after the whole thing is over carried comfortably back to bed in the full enjoyment of, it may be, a prolonged balmy repose. Surely this remarkable difference between the miseries of the old and the blessings of the new, not only in surgical, but in medical, obstetrical, or, indeed, in any other practice in which the anguish of pain, or even the dread of it requires to be met and removed, is worthy of our special notice and grateful remembrance towards those who have aided in thus so obviously befriending suffering humanity, and which now brings us to speak of one whose name will always be intimately associated with this and many other matters on which he has left the stamp of an almost unparalleled energy of purpose, and deservedly acquired a world-wide fame; need we say that we refer to J. Y. SIMPSON, of whom we must here endeavour to warmly, yet plainly, speak, in case another and fuller opportunity for doing so may not be afforded us.

We first made Simpson's personal acquaintance upwards of fifty years ago, and knew him not only long, but intimately, having witnessed and watched his onward and extraordinary upward progress during the greater period he afterwards lived. He died in 1870. Our acquaintance, and we are glad to say our friendship, extended over so many years, that we may truly say we knew him longer, if not better, than any even of his still-living friends, and which may go far to render what we may be induced to say of him the more reliable, if not the more interesting, because our opinions and notions of Simpson are not founded without a personal book, which some who have, to our mind, bespattered his true character and just memory either with the filth of fulsome flattery or the very reverse, would seem not to have possessed, or if they had, they have certainly made a sorrowful use of it. We can speak of him as a fellow-student and young friend as we first met him more than fifty-five years ago. This may rather surprise some present, especially if they are not aware of the fact that we were of the same age, Simpson (who was always first and always kept first in everything) having managed to get into the world just two months before us in the year 1811, which we ought perhaps not to mention lest our observations be held as necessarily those of second childhood. We remember our first introduction to Simpson as if it were almost like yesterday, and as our then meeting was under circumstances which tended to early indicate the material he was evidently made of, long before any one could even dream of its ultimately turning out to be of such an extraordinary kind, we may here cite the facts connected with it, and which we have often before done.

During our student days it was more the custom than it is now to strive to get behind the counters of dispensing chemists, to learn materia medica and pharmacy, to see and make up physicians' prescriptions, the best of all practical teaching, nowadays conducted in connexion with the public dispensaries. We were fortunate enough to get into one of the then well-known shops of Pugh & Plews, that in 35 Northumberland Street, at the corner of Dundas Street, where we, along with one or two other embryo medicoes were duly installed; and when there, earnestly engaged in pill and potion compounding, in walked one day a gentleman, followed by a short dumpy lad, clad in a Heriot or rather Watson Hospital like attire, cap and glazed front, short and square cut tailed coat, and a rolled up bundle under his arm, which afterwards turned out to be a Scotch "ranchan" or frieze cloak with a bright-red plush collar. We had been led to expect a new comer, and on his being introduced to Pugh and requested to join us behind the counter, we all, of course, narrowly scrutinized our fresh companion, with the view of at once, if possible, taking his exact measure, but which we found by no means easy, seeing that the new and somewhat odd looking arrival, immediately on his introducer and Pugh leaving him with us, instead of as usual hanging back or diffidently waiting for some shop-work to begin with, which did not, however, seem at all necessary in the estimation of our new and short acquaintance, for scarcely half-an-hour elapsed when, to our consternation (none of us could say admiration), he at a bound took, unasked, possession of the very top of the shop class by jumping up on the high desk stool (a rostrum which none of his predecessors present had scarcely ever ventured to occupy), but he, the go-ahead looking duffer, lost no time in achieving his onward intention, for, heedless of our observation, he coolly wheeled himself round, after looking into Duncan's *Dispensatory* (the only book on Materia Medica then in use on the premises), and at once began to pull out the alphabetically arranged shop-drawers, one by one (beginning at Acacia gum), and putting handfuls of their contents on the desk alongside his book, and which he thus studiously continued to pore over day after day until he appeared to master every blessed drug of which there was a published description; after accomplishing which, he left the shop to so assiduously apply himself to other branches as few students of our acquaintance ever did. At the early time we now speak of, this lad, *J. Y. Simpson* (for the studious callant we have been referring to was no other than he), was living with his brother, the baker, in Duncan Street, and in whose back-shop he even then wrote one of his first and best papers (that on "Hermaphroditism"), published in Todd's *Cyclopedia of Anatomy and Physiology*.

If time permitted, we should gladly avail ourselves of this opportunity of glancing at a few points connected with the life and work of J. Y. Simpson with which we became early familiar, they having been narrowed within the sphere of our personal and private observation. Simpson's student career was that of great promise, the favourable promise of a goodly yield, because of the forethought and care he studiously bestowed on acquiring the true student power of concentrating his attention so as to measure, and if possible, to master the minds of others, and thereby materially to promote his own success arising therefrom. It will not do (as we know it to be too often done) to make out, or to talk of Simpson as "a perfect genius." Genius is unquestionably a heaven-born gift, and generally gets to the front without the labour required from ordinary mortals, who must put themselves head and shoulders to the wheel as well as the battle of life, in order to reach anything like an advanced point of excellence. Now *Simpson* was by no means a genius of the first or heaven-born order, but to our mind, an insatiable searcher after what his naturally keen appreciation indicated to be the most likely things required. To deny him to have had genius, of this, perhaps the more useful stamp, would be unfair. This, however, may not be the place nor the time to dwell on such a question of varied opinion, or on what Simpson personally accomplished, another and more suitable opportunity may be afforded us for so doing, and which we may be induced to accept, if for no other reason than this, that, while perhaps a deal too much has been said in his praise on the one side, and on the other more than enough has been allotted to his dispraise, we fancy what we really know of his character and conduct—professional and private—might be made, if fairly dealt with, to do his praise and fame much more justice than perhaps some have been tempted to mete out of their vials of friendship or the reverse. It is far from easy to fairly measure or rightly adjudge the real deserts of such a many-sided character, or to meet the oft-repeated accusation of his being not only a ready twigger, but an able prigger, assorter, and utilizer of what others had originated, but failed to timeously or to sufficiently carry out. We dissent from the justness of such aspersions as would lead to the belief that he willingly sought to unfairly claim or to usurp the creations of others, since it was rather to bring aid to their advancement that the influence of his instinctive and reflective power of grasping at principles and bringing them into practical usefulness was generally exercised, and that in such a way as to well entitle him not only to a prominent seat on the platform of professional progress, but to the advanced position of a leader, full of active enterprise, and with a talent and prowess not often, if indeed ever equalled.

There are some, not perhaps very many, whose estimate of Simpson is far different from ours, seeing that they are occasionally, as if seriously, induced to ask the wonderful question, What, in the name of wonder, did *he* ever do to justify his being so universally spoken about and so much made of? Although a very foolish question, it ought to be fully answered, so as to shut up the usually silly inquirer whose anti-Simpsonian bias has, through some source or other, become blindfolded as well as strangely prejudiced. Our answer to such a question, which unquestionably questions the mental soundness and power of judgment of the majority of the present body of mankind, is usually to this effect, viz., that if the questioner has, or ever manages to have, children, whose children, or even children's children are fortunate enough to have ears to hear and eyes to see, they will be sure to be found attentively listening to stories about, and believingly looking at pictures of Simpson, as *The discoverer of chloroform* (for the devil himself will never be able to dissociate the one from the other), that they, and indeed all the children of the civilized world, will be found talking of *Simpson* when their own forefathers or foremothers are so long buried that to their own flesh and blood even "their memory and their name will be gone, alike unknowing and unknown." It may seem odd, especially to those who know the full, true, and particular circumstances of the whole case, nevertheless it so happened that J. Y. Simpson was fortunate enough to shuffle his trump card so well as to "win the trick," which will ever ensure his name and fame from being black-balled in any ballot-box or society in the world. Of this, at least, we are assured, that if even the whole world, civilized and uncivilized, were "polled," and especially if the "fair sex," or even the effeminate portion of the black sex were, as a matter of right, legally, or for the special occasion only temporarily enfranchised, our deservedly lucky friend would not only be returned at the "top of the poll," but enthusiastically, because gratefully, carried on the shoulders of those for the relief of whose bellies he had done so very much. But altogether apart from the claim Simpson had of being a notable discoverer in regard to chloroform, even admitting for the moment that others were previously aware of its special character, does that, we ask, do away with the credit due to his memory for the amount of energy and unparalleled measure of self-devotedness with which he so unsparingly tendered some of his best years in proving, not that the fluid known and named chloroform was chemically composed of $CHCl_3$ (of which he knew little and cared less), but that it possessed a wonderful anæsthetic virtue, by the proper use of which his fellow-creatures might enjoy and have enjoyed unspeakable comfort—the, to many, great comfort and blessing of relief from pain, however severe—and for which experimentally applied "discovery," "hit," or any other conceivable term that some may possibly take either into their heads or hearts to apply to it, suffering humanity will never and ought never willingly miss the opportunity of gratefully remembering J. Y. Simpson?

But be all that as it may, no one, we think, can fairly or reasonably question Simpson's immense capacity for practical, useful, or even brilliantly original work, that he proved himself to have genius, not merely in the comparatively limited sense, as some have thought and many persist in saying, of being a quick observer and ready appropriator of the perceptions and suggestions of others, but individually, and as if instinctively endowed, not only with the power, but with the will to work unaided if need be (which Simpson assuredly never grudged to do), and that with a wonderful ability to immediately perceive and adroitly store up so as cleverly to adopt what of the usefully important he found to be either neglected or unutilized by others, and of which too often unrecognised or too seldom applied sources of fruitful discovery no one ought to be blamed, but on the contrary, lauded for bringing to their proper light, for what is or ought to be the truest and strongest evidence even of so-called genius in its most useful form, but the appropriating and successfully exercised power of fertilizing thought or action to the readiest and the truest acceptance to the minds and hearts of mankind?

We are strongly of opinion that Simpson has, even since his death, had scrimp justice from most of us, and therefore we avail ourselves of this opportunity, while speaking of the more celebrated of those who have gone from amongst us, to say this further in regard to him, that a busier life has seldom or never been led; and considering the important and trying duties he undertook and discharged, we may here also venture to say that, although far from faultless, he proved himself pre-eminently, if not immeasurably, beyond the ordinary front of our professional ranks, whose depreciatory fire, however strenuously kindled or keenly blown, will fail in materially affecting his admittedly, if not deservedly, extreme popularity, for his active ability, if not successful boldness, are too deeply imbedded in the soil of the public mind to readily die out or be easily uprooted.

The memory of Simpson's achievements, and of the far-seeing, dauntless, and distinguished power which he displayed in every subject he touched or interested himself in, may possibly by some be soon if not already forgotten, but of this we are assured, that few "men of their time" have lived, died, and been buried like our old friend and associate; and that, take him all in all, faults and failings included, we will not soon look upon his like again.

There are many others on whose professional standing and character we should have remarked, but time fails us to do so at present, and seeing that we have devoted so much of our talk about our local surgeons, something assuredly ought to be said regarding some of our great and well-known physicians, of which Edinburgh has always had good reason to be proud, and of whom we meantime can only refer to ALISON and ABERCROMBIE, who were two of the greatest and most honoured physicians of their time, or, indeed, of any time. As they lived and died with us in this city, leaving names and fames unsurpassed alike for professional worth, our personal remembrance of them may not be here uninteresting, especially as we repeatedly had the good fortune not only to see and to hear them, but to speak to them in a humble enough way regarding cases in which they were particularly interested, and as to which, alike to young and old who sought or desired their fatherly and ever willingly-proffered counsel on behalf of the distressed poor, there was no manner of difficulty.

Regarding the two noble specimens of our common profession—W. Pulteney Alison and John Abercrombie—much could be said, were it necessary to cull their praises from out of sources beyond our own, which time here whispers, "Let alone for the present, as brevity is necessary."

The great professional reputation of *Abercrombie* was mightily and most deservedly enhanced by an influence which few ever cherished and exercised with more becoming gravity and practical consistency than himself. We allude to that mighty influence for good genuine personal worth in heart as well as in head, willing and able to render, and that without the slightest appearance of fussiness or pretence, not only the sound advice of a wise and good physician, but the sober-minded regard and sympathy with which his soul seemed always imbued, and charged, as if by divine commission, towards the suffering and the dying, who could scarcely fail to notice in the quiet and thoughtfully earnest demeanour of Abercrombie the obviously proved physician and gentleman of the highest and best possible class.

Alison was mentally and heartily, as well as bodily, a great and noble man, just such a character as to be well worthy of his country's fondest regard and most loving remembrance, and we have often wondered that here, where, apart from his distinguished professional merits, his public, philanthropic, and truly benevolent spirit was always so practically, yet so unobtrusively and faithfully, exhibited—we cannot help thinking that such a noble specimen of humanity as Alison should have been allowed to pass from amongst us without some standing public memorial of his greatness when with us, for who that ever saw Alison, or at all knew him, will venture even to question his comparatively great pre-eminence in regard to meriting and receiving the glory, such as it is, of sculptured memory, among the already honoured ones standing in Princes Street, with whose admitted genius, intellectual vigour, and fidelity to principle, our revered Alison might well have stood, combining as he did professional worth, active beneficence, sincere piety, and other traits of nobleness of character. Alison's moral dignity of character was really grand, being notably distinguished as a devoted worker and truly beloved physician among our city poor, to whom he so abounded in charity that it was often said of him, "He made his fortune by his talents, and spent it by his benevolence."

It was, especially as we now look on it, really something to be proud of, that of being the sole conductor of a post-mortem on an occasion of such deep an interest, as to induce two so distinguished physicians as Abercrombie and Alison to meet, in order to compare notes as to the correctness of their previous diagnosis, and to witness the pathological evidence of their ante-mortem opinions. We happened then to be Lizars's class prosector and demonstrator, which led to our being requested, if not selected, to perform the post-mortem in this special case, which was that of a young lady from the country, and whose body lay in apartments in Greenside, where we found ourselves to be over-viewed by the distinguished pair who, punctual to their appointed hour, had just arrived.

The particular organs we were requested to display, so as to determine their special conditions, were, as we even now well remember, the heart and lungs, and while doing this, as we for sometime afterwards had too good reason painfully to remember, it so happened that, while removing the latter (the pleuritic surfaces of which were firmly adherent), we unfortunately scratched our finger against the cut extremity of a rib, and which slight abrasion, although scarcely observed at the time, nearly cost us our life, and which grave-like occurrence the more deeply impressed us, not only to the notable circumstances connected with the case we are now referring to, but which has often before led us, while reciting our escapes from the effects of dissection wounds (of which we, somehow or other, have had more than a common share) to speak, as we are now doing, of the remembered association with the great Alison and equally great Abercrombie, of whose honoured memories the Edinburgh profession may well be proud.

It is perhaps too long ago (it being long before we could be expected to form a sound enough opinion) to even now venture to give anything like a correct judgment as to their diagnostic views in regard to this case, but in specially examining the heart, we picked up enough of their conversation to enable us to understand, or at least to believe, that that organ did not come up to either of their expectations, *i.e.*, it was neither so big nor so diseased as it ought to have been to be in accordance with their diagnostically and previously expressed conviction. We, however, fancy that we have not infrequently since then witnessed hearts of the same sort which during life were heard at times to blow away at such a rate, and kick up such a row as to more than astonish and greatly disappoint the post-mortem expectant, whose expression is worth studying on perceiving how very little, if any, structural change may be found at death even after long-continued impulses and startingly loud murmurs, which, as experience teaches, are often attributable to anæmic rather than to cardiac conditions, and as to which there have been great advances in diagnosis and pathology.

We know much more nowadays, especially as to the nature of those hæmic deceptions, and are therefore not so apt to be led away either by false sounds or false movements which morbid blood, or mere nervous disturbance, may directly or reflexly kindle in the heart's action, as readily enough to put off their guard those whose clinical observation and practical experience in physical, and especially in auscultatory diagnosis have not been well tested during life, and frequently verified after death, which passing remark, however, is, of course, quite inapplicable to the particular case in hand.

Had we time to talk about various other matters that might prove interesting, we would be induced to more specially refer to the local medical men and manners of our early medical days, and, besides, there is ample ground we have not as yet touched (and which it is impossible now to do) regarding the medical institutions, societies, and clubs, and the best-known men connected with them; and, moreover, there is another subject of sufficient interest to have warranted attention, viz., the important subject of the numerous changes connected with our medical press, the beginnings and the endings, the downfalls and the upshots of our local medical journals, their ways and means, and individual and conjoint modes of management—of all which much might be said, especially in regard to the praiseworthy efforts of those who have so studiously endeavoured to, if possible, bring out and keep up the literary character of the profession in Edinburgh—a tediously difficult labour, which greatly requires assistance from those who can, and certainly ought, to give it, if for no other reason than that of the credit of our medical city.

Half a century ago there were (according to the Post-Office Directory for 1833–34) about 220 medical men in Edinburgh and Leith, under the titles of "Doctors" (60), "Surgeons" (150), several of whom, however, are superstyled M.D., "Surgeon-Accoucheurs" (7), and we find in this year's Directory 270 in all; so that, although the population has since then increased from 162,403 to 295,487, there appears to be an inexplicably small addition of doctors, so far as numbers are concerned—the quality may here possibly have to do with the quantity. We cannot give names, although on looking over the Directory list we find there are very few that we did not know something about. We thought, however, it might prove interesting to note those who were connected with our medical institutions and schools, and this we have gleaned, as follows, from an Oliver and Boyd's fifty years ago Almanac, and which list of the then familiarly known names will doubtless prove interesting to all whose memories like our own go back to student days and their engaging associations, and on which, had time permitted, we would have gladly dwelt, if for no other reason than that of further reflecting on bygone years and their remembered companionships, and incidents connected with many of our old teachers and hard-working predecessors mentioned in the following list:—

MEDICAL FACULTY OF THE UNIVERSITY OF EDINBURGH.—*Anatomy and Physiology*, Dr Alexander Monro; *Chemistry and Chemical Pharmacy*, Dr Thomas C. Hope; *Materia Medica*, etc., Dr Robert Christison; *Theory of Physic*, Dr William P. Alison; *Pathology*, Dr John Thomson; *Practice of Physic*, Dr James Home; *Surgery*, J. W. Turner; *Midwifery and Diseases of Women and Children*, Dr James Hamilton, jun.; *Clinical Surgery*, James Syme; *Botany*, Dr Robert Graham; *Military Surgery*, Sir George Ballingall; *Medical Jurisprudence*, Dr Thomas S. Traill.

SCHOOL OF MEDICINE AND SURGERY.—*Professor of Surgery to the*

College of Surgeons, John Lizars; *Midwifery*, Dr J. Thatcher; *Surgery*, Robert Liston; *Theory of Medicine, Materia Medica, Botany*, Dr Wm. Howison; *Midwifery, Practice of Medicine*, Dr Wm. Campbell; *Materia Medica, Surgery*, Dr J. A. Robertson; *Midwifery, Practice of Physic*, Dr J. Mackintosh; *Anatomy, Practical Anatomy*, Dr Robert Knox; *Theory of Physic, Materia Medica*, Dr Thomas Aitkin; *Chemistry, Practical Chemistry, Mineralogy*, Dr John Murray; *Theory of Medicine, Medical Jurisprudence*, Dr Fletcher; *Surgery*, Wm. Fergusson; *Anatomy, Practical Anatomy*, Dr Wm. Sharpey; *Anatomy, Practical Anatomy*, Alexander J. Lizars; *Theory of Medicine*, Allen Thomson; *Materia Medica*, William Bathgate; *Anatomy, Practical Anatomy*, Dr P. D. Handyside; *Chemistry, Practical Chemistry*, Dr Wm. Gregory; *Practice of Physic*, Dr Craigie; *Chemistry, Practical Chemistry*, Dr D. B. Reid; *Clinical Medicine*, Drs Borthwick and Shortt; *Clinical Surgery*, John Lizars and Robert Liston.

ROYAL COLLEGE OF PHYSICIANS.—*President*, Dr J. H. Davidson; *Vice-President*, Dr John M'Whirter; *Treasurer*, Dr Thomas Spens; *Secretary*, Dr Robert Renton.

ROYAL COLLEGE OF SURGEONS.—*President*, Dr John Campbell; *Treasurer*, Thomas Lothian; *Conservator of Museum*, W. MacGillivray.

MEDICO-CHIRURGICAL SOCIETY.—*President*, Dr W. P. Alison; *Vice-Presidents*, Dr Maclagan, Professor Turner, and Dr Christison; *Treasurer*, Dr John Gairdner; *Secretaries*, William Brown and Dr William Thomson.

ROYAL MEDICAL SOCIETY.—*Presidents*, George A. F. Wilks, London, Alexander I. Hamilton, Edinburgh, William John Irvine, Malta, and Dr R. Spittal, Edinburgh; *Treasurer*, John F. Macfarlan; *Secretary and Librarian*, N. Bain.

HUNTERIAN MEDICAL SOCIETY.—*Presidents*, Dr James Patterson, John H. Pollexfen, Andrew Liddell, and Thomas Rowley; *Secretaries*, Alexander Farquhar and Hector Gavin; *Treasurer*, Alexander Hamilton.

HARVEIAN SOCIETY.—*President*, Dr W. P. Alison; *Vice-President*, Dr Adam Hunter; *Treasurer*, Dr George A. Borthwick; *Secretaries*, Drs William Moncreiff and Richard Huie.

MENTAL DISEASE LECTURESHIP.—*Lecturer*, Dr Alexander Morison.

ROYAL INFIRMARY.—*Honorary Consulting Physician*, Dr James Hamilton, senior; *Attending Physicians*, Drs Spens, Shortt, Craigie, and Borthwick; *Consulting Surgeons*, Sir George Ballingall and Dr Campbell; *Acting Surgeons*, Robert Liston and John Lizars; *Assistant Surgeons*, J. W. Turner and James Syme.

ROYAL PUBLIC DISPENSARY.—*Physicians*, Drs Moncreiff, Borthwick, Poole, Robertson, and J. D. Hunter; *Surgeons*, R. Liston, A. Watson, A. Messer, Dr Warden, W. Ferguson, and J. Lizars; *Vaccine Board*, Dr Graham, Dr Short, Dr Howison, and A. Millar; *Cupper*, Dr Sibbald.

NEW TOWN DISPENSARY.—*Consulting Physicians*, Professors Thomson and Alison; *Consulting Surgeon*, Professor Turner; *General Medical Officers*, Drs Clark, Simson, Dumbreck, Archibald Inglis, Pagan, Wood, F. Farquharson, R. Omond, and A. D. Maclagan; *Physician Accoucheur*, Dr Macaulay.

EDINBURGH WESTERN DISPENSARY FOR DISEASES OF THE EYE AND EAR.—*Medical Officers*, Drs Geo. A. Borthwick and John Smith.

EYE DISPENSARY OF EDINBURGH.—*Surgeons*, Drs J. A. Robertson and F. Farquharson.

PORT-HOPETOUN PUBLIC DISPENSARY.—*Consulting Physician*, Dr M'Whirter; *Ordinary Medical Officers*, Messrs George Glover and M. Deas.

WESTERN GENERAL DISPENSARY.—*Extraordinary Medical Officers*, Drs J. Wood, Begbie, and Russell; *Ordinary Medical Officers*, Drs Taylor, Spittal, and Ransford; *Physician Accoucheur*, Dr Beilby.

GENERAL DISPENSARY AND IN-LYING INSTITUTION.—*Senior Physician and Founder*, Dr John Thatcher; *Assistant Physician*, Dr Alexander Reid.

EDINBURGH LYING-IN INSTITUTION FOR DELIVERING POOR MARRIED WOMEN AT THEIR OWN HOUSES.—*Physician*, Dr John Thatcher.

EDINBURGH LYING-IN HOSPITAL.—*Ordinary Physician*, Professor Hamilton; *Surgeon*, James Moir.

It would be inexcusable at this time were we to close our remarks without here very specially referring to this week's noble gathering for its grand and heart-stirring occasion—the tercentenary of the opening of our University.

There is good reason for every one in any way interested in the past, present, and onward educational glory of Edinburgh to be not only pleased with but proud of the University. "Our own romantic town's college," which assuredly "rose from the people, and was sanctioned by a Scottish king," a regally countenanced and time-honoured connexion between "town and gown," which all seeking, however humbly, to sustain, are bound in honour and in justice to do their utmost to proclaim.

We have, as all ought to have, even although from a far off distance, a great regard for the venerableness, and glory, and grandeur of the noble University, in the halls of which so many grand minds have poured out their thoughts in years long gone by. Three hundred years have now passed since the birth of our University; let us hope that neither the change of time nor of circumstance will do otherwise than perpetuate and advance her universally acknowledged power in the promotion of literary and scientific acquirement. We have neither time nor inclination to enlarge on this, but if we may venture, by way of stage whisper, to suggest, as a possible modern improvement, it would be to this effect, viz., that at least a few crumbs of comfort should be allowed to fall from the tables of the now richly garnished and studiously guarded stalls of the doctoring department, and for this fair enough reason, that there are not a few who, "*ab extra*," have done at least some share of the work which has tended to establish the claims of Edinburgh as a medically famous city. This being (as stage whispers usually are) intended to be heard, without here committing ourselves further on such a delicate point, we shall only venture to add, not merely *Floreat res medica*, but also *The smallest donations thankfully received*, and *The slightest recognition duly acknowledged.*

The Extra-mural School has a special history which is too apt to be forgotten; its early efforts and prolonged service in the cause of medical and surgical science and education are well worthy of remembrance, for no one who knows its past history can hesitate to say, that if it had not been for extra-mural teachings, the name and fame of the Edinburgh Medical School would not have been so great as they now are.

Being one of those who entertain this opinion from knowing what it has done in bygone days, and being a firm believer in the efficacy of wholesome and honourable rivalry, we venture to say not only that the Extra-academical School has done good service in the past, but that the power of our University, great as it unquestionably is, would, in the event of extra-mural decay occurring, not prove sufficiently equal to the required occasion.

We have often before said, and have been found fault with for saying it too plainly, that it will be a sad time even for the University when the extra-mural fire is in any degree extinguished, and that therefore all teachers are bound to see to it, so as the great centre of educational circulation be kept in good-working order the better to ensure that its blood-stream may long and healthily continue to flow.

But after such a venturesome, although kindly intended, whisper, we must finish by hinting that even the best of things and the best of men perish, for we scarcely require to remind those of our professional brethren now present of the great havoc Time's scythe has already been dealing with us in Edinburgh.

Within a very small radius of distance, and a comparatively short cycle of time, we find the following among others have departed to their long and silent homes, although their memories and shadows cannot escape from our respectful and affectionate regard.

In walking through our mournful cemeteries we here and there pass the monumental memorials of many of our brethren, of whom it may be said in Bible phraseology, "though dead yet speaketh;" and in like manner, while walking through our greatly admired city, we here and there often pass the now vacated homes of many old and well-known friends, of whose professional and personal character we can scarcely fail to have a respectful and kindly remembrance.

Let us for a moment in imagination take such a walk, and while doing so, observe the gaps which death has created amongst us, and as we pace our straggling turn briefly mention, while passing the numerous vacant abodes, some names of their now deceased occupants. We scarcely leave this hall when we reach that of J. Y. Simpson, Robert Christison, James Begbie, Warburton Begbie, James Simson, Andrew Wood, John Hughes Bennett, Robert Omond, William Sanders, John Brown, P. D. Handyside, Benjamin Bell, Alexander Wood, John Hutton Balfour, David Skae, Charles Wilson, John Coldstream, John Burt, James Combe, John Taylor, Robert Spittal, Archibald Dickson, and though last, certainly not least, our old friend, and every one's friend, dear William Sellar, whose title to be specially noticed at this, and indeed, all of our Harveian and other convivial meetings, no one who ever knew him will willingly question.

About those who have long since or more recently left us, not a few interesting and loving memories might readily be enumerated connected not only with the onward prosperity of Edinburgh and its great medical school, but with the true dignity and honour of our great and intrinsically noble profession.

But we have already more than exhausted our time and your patience in getting so lamely to the end of this, our egotistical tether, let us now plead for its too obvious shortcomings two facts, or rather two difficulties, which may to some extent excuse the deed turning out to be comparatively so defective to the will, viz., the double difficulty of sufficiently remembering circumstances and events long gone by, and of satisfactorily dealing with them in so short a time as that here allotted to us.

When pondering over what we thought might prove ample enough material, at least for the framework, of any duty of the kind, we did not, in undertaking it, duly enough consider the difference between merely thinking over it and performing it as a written task, which last, we must now confess, has been not only much too hurriedly, but, to ourselves, most unsatisfactorily accomplished.

Although we had well thought over the unwritten book of our earliest professional remembrance, with the view of collecting and selecting jottings that might prove suitable or useful for the present occasion, it need scarcely be remarked that no small allowance should be made, not only for the natural defects of memory, which father Time in dealing with his ageing children usually inflicts, but for any trifling inaccuracy in chronological or other statement we may have made, especially in regard to matters too long gone by to leave the ready mark of complete reliability behind.

It was because our memories and reminiscences of Edinburgh medical men and professional events went further back than most of our living brethren can remember or tell us much about that we were induced to adopt the present text, in the treatment of which it was not required of us to go any length into comparatively recent matters connected either with those not long departed, or referable to the greatest of those still with us, which we shall leave as a prospective retrospective duty to some Harveian or other who may be mindful enough, it may be fifty or more years after this (for 'tis said the hearts of true Harveians warmly pulsate towards the memory of the deserving past). We willingly leave it to some one, perhaps now present, when other fifty years have come and gone, to tell their then comparatively young brethren some personal memories of the past concerned with Edinburgh and its more interesting professional associations, deserving friendly consideration or kindly remembrance.

So let us now, in conclusion, express the hope and belief that the "young Edinburgh" of the present, as they themselves advance in years—and, we trust, in prosperity and in happiness—will have some good thoughts to think, and few unkind things to say, of those who once were also young, but who may have gone as they and all must also in time do.

III.—ON SOME POINTS OF IMPORTANCE IN MEDICAL PRACTICE.

By R. H. GUNNING, M.A., M.D., F.R.S.E., Ex-Pres. Roy. Physical Society, Ex-Lecturer on Anatomy, Dignitary of the Empire of Brazil, etc.

(*Read before the Medico-Chirurgical Society of Edinburgh, 7th May* 1884.)

IN bringing the following remarks and cases before the Medico-Chirurgical Society, I believe they will be found to contain suggestions of practical importance. I mean to show how much can be done by hygiene and simple means, without the evils and expense of drugs and operations. I have long preached them abroad in my intercourse with members of the profession, but now submitted, more formally, to the appreciation of this practical and intelligent Society, I hope they will be duly studied, and that they will help to alleviate humanity with less suffering and at less expense. Our profession is not a mere trade to live by, but a priesthood for "the ills that flesh is heir to," and each of us must do his best, as he shall answer, to fulfil this mission.

I propose to-night to record and illustrate my experience in medical practice of bloodletting in pneumonia; of tartar emetic in strangulated hernia; of the horizontal position; of hot water; of regulated diet; and of the bad effects of over-drugging.

1. *Bloodletting in Pneumonia.*

The question of bloodletting in pneumonia is of great importance, from the frequency and danger of the disease. The treatment has gone from one extreme to another; but not for that have we attained to certainty. "In medio tutissimus ibis" is still, I believe, the best rule. In the question I have no prejudices, and I am quite ignorant of the polemic which has been waged on the subject since I went abroad, having been so long and so far away from books and periodicals, and having no love of mere polemic. I agree that a great addition of facts has been made of late years to medical knowledge by special or subdivided studies; but I do not admit that careful reasoning and the power of correlating facts have kept pace with and proportion to this great richness of facts. Routine is still obstinate, and guessing and mere experiment are too common, while cautious inductive reasoning is too rare. Premising these remarks, I will submit my own experience in the treatment of pneumonia to the judgment of the Society.

In 1849, I went to Brazil as medical officer to a large gold-mining company to recover health in the fine climate of that part of the province. It was my intention to return to Edinburgh to follow my career in anatomy and physiology, but the benefit of the climate, and success in a quiet practice, induced me to stay on and on for much longer, till, from one cause and another, I was 33 years in the country.

I had a hospital at a large gold-mining company for natives and Europeans, besides private practice at agricultural estates, in different directions, in a wide circle. The labourers on these estates were daily exposed to sun and rain, and easily took bronchitis, pleurisy, or pneumonia. In the gold-mine they were much exposed to cold currents of air and wet while much heated with the heavy work of blasting, transporting, and breaking up the masses of stone containing the gold. The proprietors of agricultural estates are all great doctors, or "curiosi," and only send for regular doctors when they themselves despair of success. With this delay, I found cases of pneumonia recovering when I arrived; and remembering Dr Alison's teaching of cures effected without bloodletting, I let the patients alone, and merely advised a blister, placebos, quiet in bed, and care in diet. In this way they recovered, and my lancets were in disuse for nearly 10 years, and I felt flattered that I had many cases to support the new non-bleeding school. The gold mine not succeeding, the labourers were brought down from the interior towards the metropolis, Rio de Janeiro, to assist in making the first great national carriage road. Besides them were, say two to three thousand others (blacks, Brazilians, Portuguese, Italians, and Germans), employed in heavy earth-cuttings, blasting of rock in and out of tunnels, and at building bridges over rivers, etc. This new locality, where I also had a hospital, furnished me with many cases of pneumonia, and I continued the same non-bleeding treatment. In the hot season, those sequelæ of pneumonia—dysentery, diarrhœa, hæmorrhoids, swelled feet, and liver complaints—show more markedly than in the cold season, and thus much labour is lost. On this account my attention was drawn by Brazilian professional brethren and owners of slaves to the greater frequency and more marked character of these secondary symptoms in cases treated by me than in those treated by others by bloodletting. I could not deny the truth of the criticism, and took it to heart.

I changed my plan, from conviction that I was in the wrong, and also to satisfy the owners of the slaves. The rationale of the use of bloodletting, as taught by Dr Alison, came clearer back to me, and all I have observed for many years since, in numerous cases, convinces me of its superiority.

First of all, I had the patient bled in the arm, to diminish the tension of the circulation and relieve the distress in the chest, and in the standing posture, to favour, by faintness or nervous collapse, the arrest of inflammation and fever. I usually took from 4 to 8 ounces, and the patients would implore me "for God's sake" to bleed them, and as soon as done would add, "thank God" for the great relief. Along with this, I had a large blister put over the inflamed part, and the bowels were cleared with tartarized saline solution if strong, or with castor oil if delicate by age or constitution. Food was kept away till a favourable reaction set in and appetite was manifested, and when given was in small quantities, and of mild quality. Bloodletting, evacuation of the intestines, a blister, abstinence from food, and quiet, were the effective and regular treatment, but if the skin required to be kept moist, the *smallest quantity* of tartar emetic in solution, *as a diaphoretic only* could be used, as could be an opiate for sleeplessness or unusual pain.

The blister is a good cure of the part. First, it protects the inflamed part; next, by breach of surface and serous exudation, it relieves the circulation in the inflamed lung. It is a kind of second bleeding, like the watery discharge from the intestines by a saline purgative. Both discharges keep down the tension in the circulation without wasting the hæmatozine, and both can be kept up or dispensed with according to symptoms. An empty state of the digestive tube also helps much to check the inflammation and to favour reabsorption. Men and animals starved or semi-starved soon lose weight by absorption of normal tissues. In like manner abnormal exudations or tissues are reabsorbed, and more easily so, than normal tissues by an empty or starved state of the intestines. But neither this nor the blister nor saline depletives should let us dispense with bleeding at the arm as soon as we see the patient.

The rationale of bloodletting is well given by the late Dr Alison. First, the tension in the chest is relieved by the opening of a vein, on simple hydrodynamic principles. Then the check and reabsorption of exudation is favoured *endosmosically* on Dutrochet's principle, by lessening the volume of the blood, and by the serous depletion from the skin and intestines, caused by the blister and saline purgative. In proportion as the area of the inflammation is limited, and reabsorption complete, will be lessened the secondary complications of enlargement of the liver, dysentery, anasarcous legs, etc.

I never repeated the small bleeding. The exudation from the blistered surface and the discharge from the bowels were enough, after the bleeding, with abstinence from food and perfect quiet, to promote curative reaction.

In all these cases, whether pneumonia proper or mixed up with bronchial or pleuritic complications, I only lost one in the acute stage,—a young person treated outside the hospital at a time of excessive heat, and where the relatives had given first their own nostrums. Of course the genial climate of the table-land of Brazil was a great advantage over the climate of Great Britain; and then the patients were all comparatively healthy working men of simple habits.

I lost several, however, from six months to two years afterwards in the non-bled cases from the sequelæ,—from enlarged liver, and ascites, or dysentery, etc. They were cases of slaves whose masters would put them back to heavy work, only to light up the old inflammation and its consequent sequelæ from central obstruction.

The conclusion, however, which I wish to inculcate is, that the cases bled only once, and in so slight a manner, were cured *more immediately* and *more completely* than by my previous practice of leaving them alone. I at once relieved the dyspnœa and arrested inflammation, and the sequelæ ceased which so often followed the non-bleeding practice. In short, I would not like to ignore so simple and innocent a practice as the best preliminary to a blister, and evacuation of the bowels, and strict dieting. Let the unbiassed try the two plans in similar circumstances to judge which soonest and best relieves the sufferer. Enough that I record my experience.

2. *Tartar Emetic in Strangulated Hernia.*

One day, 25 years ago, a patient was brought to the hospital in a moribund condition, and vomiting stercoraceous matter. Not being able to reduce the hernia, and knowing the heavy voluminous nature of the man's food, I gave him two grains of tartar emetic to empty thoroughly the bowels. The effect was wonderful. He vomited much solid matter mixed with gases, and, with the abdomen thus empty, I found I could reduce the hernia. The case impressed me. I reasoned that such gases and solid matters very often are the true hindrance to reduction, and that the first thing is to empty the bowels well, and *make space in the abdomen* for the return of the intestines strangulated and extruded from the cavity. I often afterwards tried the same plan with like success, and all I wish under this head is to advise the practitioner to try this plan, when unable to reduce the hernia, before operating. It is a great matter to save the patient pain and risk. I use tartar emetic merely as the simplest and quickest emetic.

It might be feared that vomiting would aggravate the strangulation, but it is not so. Perhaps the vomiting moves a little the strangulated portion, but in any case it clears out all gases and solid matters, and makes the abdominal cavity empty enough to receive back the extruded intestines.

The following case, which occurred before I left Rio, is pertinent to the above:—A distinguished European contractor found an old hernia irreducible, and was in great suffering. The doctor attending him called in a naval surgeon and a distinguished professor of surgery for consultation. Unable to reduce the hernia, they resolved to delay operating till some hours later on; but before the hour marked arrived, the patient had belched up gases and solid matters, and was able himself to reduce the protruded bowels. He was a nervous gentleman, and dreaded an operation; and of course the surgeons in conference were glad not to have to operate. The case, however, shows how important it is to have the bowels clear of their contents for successful manipulation.

In conclusion, it is an easy experiment; and if still unable to reduce the hernia, the necessary operation will be all the easier and safer from such a complete evacuation of the intestines.

3. *Horizontal Position.*

It is enough to look at the veins on the back of the hand or inside of the leg, to see the effects of hydrostatic pressure. The limbs being perpendicular, the veins swell; placed horizontally, they become again normal. If so in the limbs where the veins have valves, more so in the veins where there are no valves, as in the lower intestine and in the reproductive parts. How easy to prevent varix, varicocele, piles, and leucorrhœa, by reclining sufficiently, or to develop them by overstanding or overwalking. This is what I think is not sufficiently estimated in books, nor in practice. Too much is expected from local applications, or operations of one kind or another, and too little is trusted to the help of position, or physical law.

Then we must not forget that the force of the heart and general circulation is also diminished by the recumbent position. The pulse increases in frequency by sitting up, and more by standing up.

4. *Hot Water.*

Hot water is recognised in many cases and in many ways as a good therapeutic agent, but I do not think the recognition is so general as it should be. Wherever pain or inflammation exists, it is a most powerful calmative. Opium and other narcotics remove pain by deadening the nerve-centres; but hot water seems to act by direct dynamic action on the local nerves, and by relaxation of local tension. However this may be, it gives great and immediate relief wherever pain and inflammation coexist, as in acute ophthalmia, whitlow, sprains, burns, piles, cystitis, inflammation of the rectum and reproductive organs, painful menstruation, and acute leucorrhœa. It must not be merely tepid, but *as hot as can be borne*, and it must not be for a short time, but for as long as the pain continues. Fomentations and poultices, when medicated, mean more as heat and softening than as medicines, though these get the chief credit. In whitlow, it will prevent, if early used, but in any stage it eases pain, and helps suppuration as nothing else can do should the bone necrose. On one occasion a heavy iron fell on my large toe. It took immersion in the hottest water I could bear for a whole night to settle the terrible pain and gain sleep, but from thenceforward I was at ease though I lost the nail gradually. Losing the nail showed how severe the bruise had been.

Ladies suffering agonies in menstruation are better relieved and cured by very hot hemicupia than by anything else. Of course, complications must be attended to at the same time. The bowels may need attention, or a weak circulation and cold extremities may need a hot stimulant—hot punch—but such complications being attended to, the hottest hip-bath is the surest means of relieving pain. And not only in painful menstruation, but when defective or in excess. Used for successive periods, the first is increased and the second is diminished. In acute leucorrhœa or irritated rectum, in the tenesmus of diarrhœa, besides the hip-bath, hot water—simple, or medicated with opium—can be injected into the passages. I even use a very warm hip-bath after labour when the lochiæ are excessive and the patient is feverish. In this way ablution is effective, the parts are soothed, and a source of puerperal fever—especially in warm climates—is removed. I have the patient carefully lifted and set down in a plentiful and very hot hip-bath. A recent illustration of the use of hot water occurred to me in Italy. A lady's absence from the table d'hôte was daily regretted by her husband and friends, and medicines were doing her little good. I found she had had an abortion about a month back, and that the hectic and lassitude were due to painful post-partum discharge. I advised her to sit down at once, and again and again, in very hot water, and also to inject it plentifully. She was soon relieved, and on the second day was at table, and out everywhere quite well. She might have got emaciated, hysterical, and ruined in health, ere the medicines of her routine doctor would have cured her.

While on hot water and the hip-bath, let me mention what has occurred to me as of wide social importance. It is the use of baths for the poor, especially for women. The want of ablution for the whole body, but especially for the digestive and reproductive outlets, is a cause of much discomfort and many diseases, especially in women. Public baths are too expensive and not at hand, and have never been availed of, except by a very limited number of the community. What then is best? It is simply for medical men to make a propaganda of good, cheap hip-baths to families. The first cost is within the means of the poor, and would save much suffering and much doctoring. Every day it would be ready for cold water, while the tea kettle could be enough to compose a good hot-bath when needed.

5. *Regulated Diet.*

The function which influences all others most is digestion. This all right, all is right, and *vice versa.* Cures, after operations, are accomplished by nutrition, and this will be good, or the contrary, as the digestion is good or the contrary. This subject of digestion and nutrition should be well understood by surgeons. The preparing a patient for an operation, or treating him after, hang much on this. Whatever dexterity a surgeon may have he should also understand physiology well to have success. He may fail sometimes from neglect of the simplest dogmas of physiology. A friend and myself, when abroad, had many cases of cataract. We did the operation in the same way; he better than I, for I had no gift of hands. He lost very many of his cases, and mine succeeded. He said, one day, he could not understand this. I replied, "It is simple; you let your patients *eat and drink* as they and friends like after the operation, while I starve mine for one or two days till the wound is healed and the retina is safe." A full stomach or improper food will soon befool the best done operation. I have cured serious fractures without fever intervening merely by semi-starving the patient. In my own case, when shot in the head, I abstained from all but water, or a little tea or dry toast, for days, and had scarcely pain and no fever or erysipelas. After days I used stewed prunes, potatoes mashed with salt butter, to be simple and laxative. I took no wine and no meat for weeks, and a remarkable cure was the result.

In all cases, medical or surgical, attention must be given to the digestive organs, to see that no peccant or irritating matter exists, and that they be carefully watched afterwards.

I once treated a lad for fracture of both thigh bones, a bullock-car having passed over his limbs. I set the limbs, and kept him semi-starved for days. Only gruel or weak chicken broth was allowed. He had no fever and got round beautifully. On another occasion the car passed over him and killed him. In short, let all ingesta be in the smallest quantity, and of mild quality, to avoid inflammation. Spirits in every shape are injurious.

6. *Abuse of Medicines.*

I believe strongly in the proper use of medicines, as anodynes, emetics, purgatives, diaphoretics, diuretics, etc., but I am also sure of the much abuse of them. In 1834, while attending a provincial infirmary, I was struck with the recovery of patients given up to die. The medicines, especially mercury, iodine, and iodides, would be suspended, and the nurse have orders to treat the patient kindly before dying. Immediately recovery would occur! This impressed me, and ever since in practice I have studied whether medicines were doing good or harm. I always held, and still hold, that homœopathy is chiefly the non-abuse of medicines. In the time of Dr Black and Professor Henderson of this city, when this question was once publicly discussed, I challenged its advocates to try 100 cases without medicine and 100 cases treated *secundum artem* against 100 treated homœopathically. I affirmed that, in the first case, the result would be as good as in their 100 cases, and that in the second mode there would be more success. The challenge was not taken up.

In Brazil my success was in cases treated by others. I merely suspended medicines, and put the patient upon hygiene, science, and common sense, correcting ignorance, neglect, and bad habits as to food, air, exercise, baths, etc. My success in chronic cases was great, and people declared that I must have used medicines, and very strong ones too, for I could not have made such cures otherwise! Some selected cases, further on, will be examples of this abuse of medicine, of diet, and of the horizontal position.

Emetics, purgatives, anodynes, etc., relieve symptoms but do not go to the root of the matter—error in diet, dress, habits, ventilation, etc. As symptoms recur they have to be repeated. This was the English system of "dose and cure" of the glutton or the beer-swigger, only to "dose and cure" him again. The pills, potions, and powders were the general practitioner's chief income, more than from *honorariums.* But homœopathy, with its metaphysics and paradoxical wonders, and hydropathy, with its hygiene and appropriated science, have done much to correct this abuse of drugs.

Mercury is a good medicine in its place and in careful quantity, as is iodide of potassium. They will destroy abnormal exudations or organization, and the germs of syphilitic taint, but carried beyond this object they will debilitate and destroy the body itself. Quinine is a good tonic and specific, but in large doses it is most pernicious. And why in big doses, if small ones will serve? What deafness and loss of sight has it not caused? I have known a child made deaf and dumb with one large dose. I have seen delicate patients take 50 grains in a day and succumb, whose stamina were not equal to 10 grains. Small repeated doses can do all, I believe, that large doses do, without doing the mischief.

At first when yellow fever appeared in Rio, the deaths were few when an emetic or castor oil were given early, and the case was left to careful nursing. Since then, and now, a large part of the mortality is from so-called scientific or guessing and heroic treatment.

So with chloral and chloroform,—both good agents when carefully used. I know little of chloral in practice, but I have studied chloroform, and I believe few accidents would occur if it were well understood. When Sir J. Simpson introduced it into practice I made many experiments on dogs and rabbits, and was convinced that it acts directly on the capillary circulation in the lungs, and that death occurs after the manner of drowning when taken too long or too much. If this is so, then it is all-important not to delay its operation too long. A person under water so many minutes may recover, but when so many minutes more it is fatal. The assistant who gives chloroform should understand this, and be most watchful. He should note the quantity used and the time, and it should only be given *on the operating table*, and when all is ready for operating. Thus the time is shortened all possible—the great point. It should not be applied and withdrawn at first, but allowed to have its effect at once. Inattention to this wastes much chloroform, lets the air disengorge the circulation in the lungs, reawakening the patient, and saturates too much the body. A good simple plan is the piece of surgeon's lint laid over the nostrils and mouth, and wetted sometimes if needed. If overdone, fresh air and artificial breathing are indicated, the start for reaction being in the lungs, not in the heart. I could easily restore dogs apparently dead by tracheotomy.

I will now conclude by mentioning some cases which will show the influence of these four circumstances, namely, diet, position, hot water, and suppression of drugs.

1. A young slave woman had a chronic ulcer on the shin, of seven years' standing. Various doctors had been consulted. Iodide of potassium and calomel were used in succession till most of her teeth were lost, in the belief that she had a syphilitic taint. Caustics and ointments were used externally. The ulcer looked hardened and desperate, and I concluded that, besides the irritating effect of the said medicines, externally and internally, the limb had not had due rest. I simply suspended the medicines, ordered a linseed poultice to keep soft the ulcer, and had her strictly confined to bed. In six weeks, more or less, her health was better, and the ulcer was cicatrized. Here the health was improved, no doubt from suppression of medicines, but the cure of the ulcer was mainly due to diminished congestion. In short, she had been previously treated without due attention to position, etc.

2. Next, a gentleman consulted me about a large ulcer on the anterior inner part of the thigh, of thirteen years' standing. The whole limb was swelled and anasarcous. He had been the round of the doctors within a large circle. I thought the ulcer had been treated without due attention to position, and declared I would not treat him without a solemn promise that he would keep absolutely in bed. I started him with a dose of comp. powder of jalap to assist the riddance of the anasarca, and to convince him

that I was using medicine, for medicine they must have. And, without more than a linseed poultice, diminished diet, and horizontal position, he was well in a couple of months or so. I saw him ten years afterwards quite well.

3. A gentleman patient suffered from an obstinate stricture of the urethra, of some years' standing. He would not allow cutting of any kind, and the surgeons in the city who had attended him were unable to pass any sound. The urine was passed by several openings under and about the scrotum, which was ulcerated, and nearly the size of a man's head. He was ever up and on his feet, washing, and passing urine, and I saw a good chance of bettering his state by removing all this source of congestion and exudation. I ordered him, several times a day, a very hot hip-bath to soothe the parts (for nothing soothes like hot water), and then had him put to bed, with strict injunctions not to rise except for real necessity. I made him cross his legs, not to let the large tumour depend, and dressed the raw surface with simple ointment. I also lowered his diet, to facilitate absorption of the exuded matter, and allowed him to drink much rice-water to produce mild urine, as salted, strong urine irritates the rawness of the urethra and fistulous openings. In a week or so the swelling was down, as by a charm, the fever gone, and the parts again almost natural. I found I could get my smallest sound into the stricture. In the course of a day or two more I got a very small bulb-pointed one (sent me by Prof. Spence) through. By-and-by I passed other sizes, up to the largest, when the fistulous openings closed, and a complete cure was effected. This was done by keeping him merely horizontal, and the tumour elevated, not dependent. The soothing hip-bath, the reduced diet, and the diluted urine all helped, but the main thing was position, neglected by others more dexterous in manipulation than myself, but less cunning about the importance of position, hot water, and lowered diet.

This same gentleman returned, in a similar condition, after more than ten years, declaring that the surgeons of his city could not pass the sound to dilate, and that he could not submit to any incision. I treated as before; he returned home in two months or so, again cured.

4. I will give another case. A vicar, looked upon as a saint far and near, had a pimple on the upper part of the penis, behind the gland. His brother-in-law, licensed in Italy, and another, a graduate of Paris, treated him. Caustic was applied, but only inflamed the part more. Then they assumed that it had a syphilitic taint, and gave him mercury till the gums and all his bones were sore. The caustic was continued, and resulted in a subcutaneous fistula. Into this yellow wash was injected, and sloughs came away. The more sloughing the more injections, till the fistula reached under the pubic arch. The member got immensely enlarged, and also the glands of the groins.

Then it was called cancer, and no hope of a cure could be given by them. The poor vicar made his will, and took the last sacrament of the church. Considered a very saint in the province, the lamentation was great at the prospect of losing him. An English doctor from a distance was called in. I had ceased to go from home to see cases, being now the director of a gold mine. Going to dine with a large landed proprietor, and meeting my English colleague, I asked for the patient. He said he could only think of amputation, but that he did not mean to operate on the vicar. When at dinner a note came to me from a devoted friend of the holy priest, wishing me to see him, and not let him die. I said I could not go so far, having duties at home. My host said I must go, as the vicar was his cousin. Horses were got ready, and we galloped over the Campo twenty miles by moonlight, in the cold time of the year.

When I saw the sick man, I thought him poisoned with mercury and iodide of potassium internally, and externally by yellow wash. I did away with all, had warm flannels got, and a soft mattress to keep him warm instead of his hard bed and charcoal fire, filling the room with carbonic acid. I gave him a very warm bath with my own hands. With this comfort, and that of warm clothes, and a soft bed, and the suppression of irritating drugs, he slept, for the first time, for long. I injected warm water instead of yellow wash. The sloughing ceased, and the fistula closed, and the swelling everywhere diminished. In less than two months he was saying mass in the parish church, and the cure was regarded as a miracle! The family sent me a large fee, which I returned; for I never charged priests. The parish wished to seek a decoration from the emperor, which I declined; and, baffled in these things, the good folks put up a saint of my name in the parish church, in my honour, in spite of my being notoriously a great heretic!

A large part of this cure was the suppression of irritating, poisoning drugs; but the hot water, and strict lying position, were all great factors in the result.

These are illustrations of what position, the non-use of drugs, and the use of warm water and diet do in medical cases. Let me give a recent case, if not of the abuse of medicine, at least of its non-usefulness.

All know how long the greatest statesman of the age has suffered from gastritis and torturing gastrodynia. The routine of mere scientific prescriptions could do nothing for him. At length, in the hands of Dr Schweninger of Munich, he has been fortunate. This gentleman has discerned the case better, and enforced strict diet and a general change of regimen, and the great Chancellor is again well and at work.

In conclusion, more attention should be given to hygiene, and less trust put in drugs.

IV.—NOTE ON THE BARK OF *RHAMNUS PURSHIANA* (CASCARA SAGRADA) IN THE TREATMENT OF HABITUAL CONSTIPATION.

By WILLIAM CRAIG, M.D., F.R.C.S. Ed., Lecturer on Materia Medica in the Edinburgh School of Medicine, etc.

THE plants of the Rhamnaceæ or Buckthorn order have long been used in medicine. The juice of the fruit of the *Rhamnus catharticus*—a well-known native species—is officinal in the British Pharmacopœia, and in the form of syrup is used as a pleasant cathartic. More recently the bark of the *Rhamnus Frangula*, the Black Alder—another British species—has been recommended as a purgative. It has long been used in Germany for this purpose, and is officinal in the German and other European Pharmacopœias, and also in the Pharmacopœia of the United States of America. Other species of Rhamnus have also been used as purgatives in various countries; but of all the species of Rhamnus yet employed medicinally, there appears to be none equal to that recently introduced into medical practice in America, I refer to the *Rhamnus Purshiana*, the *Cascara sagrada* (sacred bark) of some writers. This species is a native of California and Oregon, and possibly is also indigenous to other parts of the Pacific coast. It is a small tree about twenty feet in height. The bark of this tree has long been known to the native Indians as a purgative, and as an excellent remedy in various forms of dyspepsia. It is said that the Spanish residents of the Pacific coast learned its virtues from these native Indians, and have long used it extensively as a popular remedy.

A few years ago, a Dr J. H. Bundy, an "eclectic" practitioner at Calusa, California, having learned its virtues from these Spanish residents, used it extensively in his practice, and found it a medicine of great value.

The enterprising firm of American publishers and chemists, Parke, Davies, & Co. of Detroit, who have done so much for the introduction of new medicines, brought this new drug under the notice of the medical profession. It is now extensively used, not only in America, but also in this country, and I believe will soon be officinal in all our Pharmacopœias.

The bark has been carefully analysed, and is found to contain several resins, besides a neutral crystallizable body, tannic acid, etc. One of these resins is brown, of a bitter taste, and is coloured purple-red by a solution of caustic potash. Another is red, and nearly tasteless, and coloured brown by a solution of caustic potash. And a third resin is yellow, tasteless, and coloured bright red-brown by sulphuric acid. These resins constitute about ten per cent. of the weight of the bark, and probably are its active constituents.

When this medicine was first brought before the profession by Parke, Davies, & Co., it was in the form of a fluid extract, which undoubtedly contained the active principle or principles of the bark. The results of using this fluid extract conclusively proved this, for it was found to be a medicine exceedingly efficacious in the treatment of habitual constipation and various forms of dyspepsia, especially connected with affections of the liver. This preparation, however, was very bitter, and in consequence some objected to its use. With the view of remedying this defect, Parke, Davies, & Co. introduced a modified form of this extract, mixed with various aromatics, under the name of "Cascara Cordial," which is at once pleasant to the taste, and at the same time equally efficacious in the treatment of disease. This cascara cordial is now extensively used not only in America, but also on this side of the Atlantic, and having prescribed it extensively for two years to my patients, I have come to the conclusion that we possess no medicine equal to this in the treatment of habitual constipation, and for dyspepsia connected with a sluggish condition of the liver. This preparation is now regularly kept by the druggists in this city, and is at once pleasant to the taste and most efficacious as a remedial agent. The dose for an adult is twenty to thirty minims, two or three times a day. It is a safe remedy even for the youngest children, and, of course, given in such cases in proportionally small doses.

Its use should be continued for a considerable time, and the dose gradually diminished until the patient is restored to perfect health.

Its advantages may be summed up as follows:—1. It is pleasant to the taste; 2. It is safe even to young children; and, 3. It is an exceedingly efficacious, if not the most efficacious remedy known to us for habitual constipation.

V.—ON THE RETENTION OF HAIR IN THE AXILLA.

By A. Wyndham Martin.

The different views held on this subject render the question one of great interest to the student of science. The only reference to the subject made by Darwin, in the *Descent of Man*, is the following:—

"That the hair is chiefly retained in the male sex on the chest and face, and in both sexes at the junction of all four limbs with the trunk favours this inference—on the assumption that the hair was lost before man became erect, for the parts which now retain most hair would then have been most protected from the heat of the sun." [1]

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[1] *Descent of Man*, 2nd edition, p. 57.

Amongst many other theories held are the following:—

1. That the hair in the arm-pit is intended to reduce the friction caused by the movements of the arm.
2. That at the age when the hair makes its appearance there is a greater supply of blood to the part.
3. That the increased heat serves to develop the hair follicles and sebaceous glands in greater abundance.

With regard to 1, any person on a slight examination of his own arm-pit will find that there is no friction at the part where the hair is most developed. As to 2, if due to an increased supply of blood to the axilla it should also appear on the mammary region in the female—as there we see a much greater change in the blood supply at the age of puberty. With regard to 3, the development of hair on the face in the male at about the same age is not generally attributed to an increase of heat and consequent development of hair follicles and sebaceous glands. If it be so in the axilla, why should the female lack hair on the face, considering that both sexes share in the possession of it more or less in the axilla? If we examine the subject morphologically instead of physiologically, we see that the axilla, the inner part of the fore limb, corresponds to the groin, the inner part of the hind limb. Now the presence of hair in the pubic region is sufficient, by the law of "correlation of growth," to account for the presence of hair in the corresponding part of the fore limb, the axilla. On examination it will be found to bear a fixed ratio to that of the pubes, and also to correspond closely in colour. Sexual selection in primitive man, before he clothed himself, is sufficient to account for the hair on the pubes. The sexual passion in both sexes will be found to be in proportion to the development of the pubic hair, and the "law of inheritance" will explain its persistence.

VI.—ON A CASE OF PATENT DUCTUS ARTERIOSUS, WITH ANEURISM OF THE PULMONARY ARTERY.

By JAMES FOULIS, M.D., Edinburgh.

(*Read before the Medico-Chirurgical Society of Edinburgh, 7th May* 1884.)

MR PRESIDENT AND GENTLEMEN,—One morning, early in the year 1882, a young girl came to my consulting-room for advice for the following distressing symptoms:—Great palpitation of the heart on slight exertion, breathlessness, and buzzing noises in her chest, in her head and ears. She was very nervous, and her face bore an extremely anxious expression. The nose and lips were pale, with a slightly bluish tinge, and the conjunctival mucous membranes were very anæmic and flabby. There was no cough. Concluding from her pale face and lips that her symptoms were in a great measure due to bloodlessness, I made a very superficial examination at this time; but on placing the stethoscope over the base of the heart, I heard a loud blowing murmur, and at the same time felt a strong heaving impulse accompany the heart's systole. Immediately following the systolic murmur, another softer murmur was heard. These extraordinary murmurs puzzled me very much, as they were not at all like the ordinary humming murmurs of anæmia. I at once prescribed iron and arsenic and rest, and obtained her promise that she would come back to me in three weeks time for further examination and advice, hoping by that time that her bloodlessess would have disappeared, and I should be better able to localize the murmurs and discover the nature of her cardiac affection. On her reappearance in three weeks time her face and lips showed that she had gained much blood, and that her general health had greatly improved; but on examining her heart at its base, to my intense surprise, I heard the murmurs louder than they were before, and much more marked in every respect. Her pulse was fairly good and quite regular. She still complained of palpitation on exertion, and her dyspnœa was little, if anything better; also the noises in her head and chest distressed her very much. On placing the stethoscope over the base of the heart, to the left side of the sternum, in the region of the second intercostal space, two loud murmurs were heard. The first murmur, which was very loud and blowing with a decided thrill in it, accompanied the systole of the heart, and at the same time a strong heaving impulse was communicated to the stethoscope. Just before this murmur ceased a distinct "click" was heard, and then immediately a second murmur, but of a softer nature and of shorter duration than the first murmur, was heard. On moving the stethoscope to the aortic area, the murmurs were still very distinctly heard, but the click which, as I have said, joined the two murmurs together was heard much more clearly, and I believe indicated the quick and sudden closure of the aortic valve. How the murmurs themselves were produced I could not at this time venture to say. They were heard also at the apex of the heart, but not nearly so loud as at the spot already stated. *The point of maximum intensity of both murmurs was to the left of the sternum between the second and third ribs.*

Upon entering into the history of my patient, I learned that about six years previously she had an attack of scarlet fever, but she could not say that her health in any way was worse after the attack. There was no history of rheumatic affection. I advised my patient to give up all unnecessary exertion, and to rest as much as possible, and to continue taking the iron and arsenic for another month.

At the end of a month I again saw her. She was looking greatly better. Her face and lips showed that her anæmia had quite disappeared. She still had great breathlessness on exertion, and complained much of the noises in her head and chest.

On listening over the base of the heart to the left of the sternum, in the second intercostal space, a strong heaving impulse was communicated to the stethoscope with the systole of the heart, and both murmurs, as already described, were heard with extraordinary clearness—I never heard anything like those murmurs before or since. At the apex of the heart the murmurs were not so loud as at the spot indicated; and in the aortic area, while the click joining the two murmurs was very distinct, the murmurs themselves were but slightly diminished in intensity.

Being very much puzzled as to the cause of these murmurs, which, be it borne in mind, were much louder and better marked since the girl's anæmia had disappeared, I thought it would be interesting to hear what Dr George Balfour had to say as to the cause of the murmurs. After a careful examination he came to the conclusion that the case was one of patent ductus arteriosus, but at the same time confessed that his diagnosis was founded upon hypothetical rather than well-known scientific data. As regards treatment of the case, Dr Balfour advised that she should continue to take iron and arsenic, and should rest as much as possible.

From time to time I visited my patient at her own home, as she was unable to come to my house. At this time my friend Dr Wyllie saw her with me. He also kindly took me to see a case in the Infirmary which was of great interest to the physicians. The case was believed to be one of patent ductus arteriosus. I had an opportunity of examining this girl immediately after seeing my own patient. On auscultation in the second left intercostal space two loud murmurs were heard very like those described as existing in my own case, but both murmurs seemed coarser and rougher, and the girl herself had a very healthy, even ruddy appearance.

The summer being at hand, my patient went into the country for change of air, and I did not see her for two or three months, but I heard from a medical friend that he had been called to treat my patient for hæmoptysis and bleeding at the nose. From this time her health began to fall off greatly; she suffered much from cough. Her feet were occasionally swollen, and she became very anæmic.

I heard from the girl's mother frequently to this effect,—that my patient suffered greatly from breathlessness and cough, and that she often coughed up some blood, and had had several attacks of bleeding at the nose, and was now extremely pale and weak. As she was rapidly getting worse, I advised her return to Edinburgh so as to be under my care.

She returned to Edinburgh on the afternoon of the 31st August, and I saw her at 8.30 P.M. She was then sitting up in a chair by the fireside looking extremely pale and ill. What struck me at once was the quickness of her breathing. Her pulse was 120, and respirations about 54 per minute. On examining the chest, there were crackling, moist sounds on both sides in front and behind; there was constant cough, with some frothy and bloody expectoration. The veins in the neck were much distended. She could not lie down, but was kept in bed propped up with pillows. On placing the stethoscope over the base of the heart on the second intercostal space, a very strong heaving impulse was communicated to the instrument, but, to my great surprise, both loud murmurs had almost entirely disappeared. The heart was violently wobbling about and striking against a large area of the chest wall, and occasionally I heard two sounds which I can best describe by the words "filupp," "flupp," pronounced quickly. How these sounds were produced I could not then say, but I came to the conclusion that all the cavities of the heart were extremely overgorged and in a state of tension.

The pallid face and bloodless and bluish lips showed that she was extremely anæmic and somewhat cyanotic. Day by day she lost more blood in the frothy expectoration. Her urine, which was very scanty, contained one-fifth albumen. She was at times delirious. She was not allowed to take any food but milk and water with white of egg. For some time she showed a decided improvement, but the distressing cough, with bloody expectoration, never left her. Some days better, some days worse, she lingered on until about the 20th September, when she began to complain of sharp cutting pain in the region of her heart; and on stethoscopic examination a loud, continuous, rough friction sound was heard all over the cardiac area. Pericarditis had evidently set in. After her return from the country I did not again hear the remarkable murmurs. They had entirely disappeared; but it was often possible to hear the "filupp," "flupp" sounds during the violently wobbling action of the heart. She died on the 25th September, thoroughly worn out and exhausted, 22 years of age.

Such is the very imperfect history of this case so far, but I am indebted to my friend Dr Wyllie for the following notes taken at his dictation at the post-mortem examination performed on the 27th September 1882:—

Description of Body.—The body was 5 ft. 1¼ inches in length. Circumference of body just below the level of the mammæ was 27¾ inches. The body was delicately formed, rather emaciated. Mammæ rather small. There were evidences of commencing putrefaction, abdomen being distended and tympanitic. Skin over the abdominal region being greenish blue in tint. The same tint of skin was seen on the throat. Rigor mortis still slightly present in the legs, but absent in neck and upper extremities. The legs below the knees were somewhat œdematous, pitting on pressure being best marked above the ankles.

On proceeding to examine the chest, the skin over the costal parietes was first reflected before the thoracic or abdominal cavities were opened into. The chest wall was then transfixed with four long barbed crotchet needles at the following points:—

Needle No. 1 was driven into the second left intercostal space, exactly at middle distance between the two cartilages, at a spot one inch to the left of the sternal margin.

Needle No. 2 was inserted in the same intercostal space exactly between the two ribs, but at the distance of ½ inch from the left margin of the sternum.

Needle No. 3 was inserted into the third left intercostal space, exactly at mid distance between the third and fourth ribs, at a spot ½ inch from the left margin of the sternum.

Needle No. 4 was inserted in the second *right* intercostal space, mid way between the ribs, at a spot ½ inch from the right margin of the sternum.

These needles, being thus fixed in position, were driven deeply inwards in a vertical direction, and the costal cartilages were divided in the usual way on each side, and the sternum with the attached cartilages and soft parts was removed. The needles, being fixed by their barbed points to the cardiac tissues, were felt attached to the heart after the sternum had been removed.

On thus removing the sternum the needles which had been inserted to the left side of the sternal bone were all found to enter directly into the anterior surface of the pericardial sac without piercing the margin of the left lung, which lay close, ¼ inch, to the outer side of needle No. 1. On the other hand, the needle No. 4, which was inserted half an inch to the right of the sternum in the second intercostal space, transfixed the margin of the right lung in its upper lobe ¾ inch to the right of its free edge. Having thus transfixed the lung, this needle passed into the surface of the pericardium close to the right margin of the sac.

The *pericardium* was next opened. The sac was found to contain about ½ pint of blood-stained serum, and the serous membrane, parietal and visceral, was found to be coated with a delicate villous layer of soft and recent lymph, which extended in patches over the whole surface of the heart and its containing sac.

The following was now found to be the positions of the needles:—

Needle No. 1 pierced the anterior surface of the pulmonary artery about its middle, and at a spot about ¼ inch above its valve.

Needle No. 2 transfixed the *aorta* immediately above its valve, passing immediately to the right of the pulmonary artery before piercing the aorta.

Needle No. 3 pierced the conus arteriosus 1 inch below the pulmonary valve, and at a spot ¼ inch to the left of the middle line of the conus arteriosus, and then passed backwards through the interventricular septum, and transfixed the left ventricle about an inch below the aortic valve.

Needle No. 4 passed through the pericardial sac at its outer limit, and merely transfixed a portion of the right wall of the heart without entering its chambers.

The Heart as a whole was much enlarged, measuring in length from pulmonary valve to apex 4¾ inches; and when flattened out, it measured in breadth across its middle 4½ inches. Its muscular substance was a good deal softened by putrefaction. There was evident hypertrophy of both ventricles, the left wall measuring ⅝ inch in thickness, and the right wall measuring ⅜ inch in thickness. The ventricular cavities were both considerably dilated. The auricles were not pierced by any of the needles. The left auricle was only slightly dilated, and its appendix was empty and flaccid, being in position behind and to the left of the pulmonary artery, and quite overshadowed by the aneurism on the pulmonary artery to be presently described. The appendix of the left auricle as a whole was large enough to contain easily the point of the forefinger, but the cavities of its fringe-like margins were not large enough to permit the entrance of the little finger point. The right auricle was considerably dilated, except as regards its appendix, which was of natural size.

The Lungs.—The right lung, especially at its upper lobe, contained a number of old and indurated infarctions of a grayish red colour. Both lungs were greatly congested and œdematous, with a feeling of partial consolidation, probably the result of catarrhal pneumonia.

The Liver was natural.

Spleen was greatly enlarged, measuring 8 inches in length by 4¼ in breadth.

The Kidneys were much congested and enlarged, and were softened by putrefaction; otherwise they were natural.

The heart, pericardium, and great vessels, were now removed and carefully dissected, without severing the connexion of the heart and its great vessels.

The following was found to be the condition of the great vessels:—

The Conus Arteriosus was very considerably dilated. When the pericardium was first opened its anterior surface was found bulging forward with unnatural prominence.

The Pulmonary Artery measured from the base of its valvular cusps to its bifurcation, 2⅝ inches. At the bifurcation the ductus arteriosus communication with the aorta was patent; the orifice of communication being large enough to admit freely a goose quill.

The Ductus Arteriosus was represented by a very short vascular trunk about ⅕ inch in length. When viewed externally its narrowest diameter appeared to be about ¼ inch. At its aortic attachment there was a bulging of the aortic wall, which corresponded with the funnel-shaped opening of the ductus arteriosus on the inner wall of the aorta.

The Pulmonary Artery, as a whole, was found to be dilated to at least twice its natural size, but this dilatation was not uniform in all directions, for whilst the posterior, right lateral, and anterior walls presented no special bulging or marked irregularity of outline, the left lateral wall from the ductus arteriosus close down to situation of the pulmonary valve was bulged in an outward direction towards the left, and at the lower limit, where the bulging was greatest, a regular aneurismal sac was formed about the size of a large walnut. This sac was contained within the pericardium, and, as already said, lay in front of the left auricular appendix, which it entirely hid from view.

The needle No. 1 transfixed the middle of the pulmonary artery, about ¾ inch to the right of the aneurismal sac. The sac was filled internally with pretty firm coagulum, and from the sac this coagulum extended along the surface of the left anterior wall of the artery to near its bifurcation, being bound to this wall by pretty firm adhesion. A conical prolongation of this clot partially blocked the lumen of the ductus arteriosus. Externally, the part of the sac which was contained within the pericardium was covered with abundant inflammatory lymph of older date than the lymph effused on the pericardial surface generally. This lymph was deeply stained with blood colouring matter, and formed firm adhesions between the aneurismal sac and the parietal layer of the pericardium.

The primary divisions of the pulmonary artery were both of large size, the right being at least nearly twice as large as usual. Into the left division there projected for about half an inch an offshoot of the coagulum above described as existing in the main trunk of the pulmonary artery. This, however, occupied only about one-fourth or one-sixth of the lumen of the vessel.

(*To be continued.*)

Part Second.

REVIEWS.

Atlas of Female Pelvic Anatomy. By D. Berry Hart, M.D. Large quarto, 37 plates with 150 figures, letterpress pp. 89. Edinburgh: W. & A. K. Johnston: 1884.

Within recent years much has been done to weed the topographical anatomy of the pelvis of numerous errors which have encumbered it. Prominent among those who have furthered this work is the author of the Atlas now before us, and into this, his latest labour, he has entered with all his accustomed vigour. Ably assisted by the publishers, he has produced a volume which is at the same time an Atlas and a Monograph of the subject of the highest utility, and at a surprisingly small price.

Just under 100 of the figures are borrowed from other writers. These are in all cases duly accredited to their authors, but it appears to us that this might with advantage have been done with a little more prominence. Each and every plate has attached to it the words "Drawn from nature, and printed by W. & A. K. Johnston, Edinburgh," though this is only true of a small proportion of them; and at Plate XII., for example, which is taken from Hyrtl, we have to read through a couple of pages of letterpress before finding that fact incidentally mentioned.

Of the original plates, No. III., containing thirteen varieties of hymens, seems somewhat useless, and is further misleading owing to the constant repetition of an irregularity in the formation of the fourchette, and to the figuring of some hymens which are abnormal, and even pathological. The hump-backed uterus, too, in fig. 3, Plate XXI., is so decidedly pathological that the reason for its presence is difficult to understand. Why the author should have had recourse to the Greek alphabet for the lettering of fig. 4, Plate II., is not clear, but surely he might have found plenty letters in it, and have avoided repetition. Had he done so the attached letterpress would have read more easily. In fig. 1, Plate IV., the peritoneum is represented forming a pouch between bladder and vagina, extending down fully half the length of the latter canal. This is evidently a mistake in draughtsmanship, for in fig. 3, Plate XXI., which is a reproduction of the same preparation, the peritoneum is lined in red, and no such pouch is seen. Plate V., with four figures introduced to demonstrate the alterations in the vaginal axis, which may be occasioned by the neighbouring viscera, is a somewhat unnecessary addition, as it requires no great amount of reasoning to prove *a priori* the truth of the position; while of the figures one is to be found at another part of the book, and another is open to the objection of being pathological rather than anatomical. Plate XVI., showing lymphatic enlargement in malignant disease, is very obscure as a drawing, and the Atlas would not have suffered by its omission. The facts which it is intended to illustrate are interesting as facts, but a study of the plate does not render them any clearer. If made a little more distinct it would form a valuable plate in a pathological atlas. Plate XXII. fig. 4, is an extremely good and instructive section, though we would here remark that the terminology of sections as "sagittal," "coronal," "lateral sagittal," etc., is somewhat pedantic, and certainly confusing to the uninitiated. Plate XXV., "A Sagittal Lateral Section of Pelvis at Junction of Broad Ligament to Uterus," taken evidently from the same preparation as is the previous one, is also of great merit and utility. The section on "The Cervical Canal in Pregnancy and Parturition" is an extremely good one, and Plates XXXII. and XXXIII. are of exceptional value. The micro-photographs at the end of the work cannot be called successes; some of the plates are hopelessly fogged, while figs. 1 and 3 of Plate XXXVII. quite fail to convey an adequate idea of the structures represented. Two of the micro-photographs are reproduced as lithographs at another part of the work, and a comparison of the two methods of portrayal will amply bear out the opinion we have expressed in regard to them.

In his choice of borrowed plates the author has shown great discrimination, and he has made a collection complete, succinct, and of great value. The letterpress attached to the plates forms, as we have already said, a complete monograph on the pelvic anatomy of the female, and is by no means the least valuable section of the work. In his well-known clear and terse style, the author has succeeded in the difficult task of making an anatomical dissertation even more than readable and interesting. His facts are brought most thoroughly up to date, and his practical deductions well stated and logically supported. The sections on the vagina, bladder, uterus, fascia, and cervix in pregnancy and parturition are of particular excellence; while the appendices "On some Points of the Physics of the Bladder and Rectum," and "On the Etiology of Flexions," are models of scientific writing. At the same time, there is ample evidence throughout the book of hurried production and careless proof-reading. Many of the letters on the figures are not referred to in the text, some are wrongly placed, and in one plate the numbers of the figures are omitted. On page 1 the vague and incomplete statement is made that "the external genitals form the skin aspect of the pelvic floor;" and again, at page 15, Skene's tubules are described as "extending up from the meatus urinarius, where they end by branching." On the same page the author says, "We have to differentiate three states of the bladder, viz., (1.) An empty relaxed condition, during which the urine is trickling into it; (2.) A contracted condition; and (3.) A period of relaxation following the contraction. The bladder has thus a systole, a diastole, and a relaxed condition." The insisting on a period of relaxation following the contraction as a distinct period, seems an unnecessary straining at scientific accuracy; and the mention of a special period during which the urine is trickling into the bladder would lead to the inference that during the other two periods no such thing was occurring. Of course, we know that Dr Hart does not mean anything of the kind, but we only mention it as evidencing hurried writing.

The points which we have drawn attention to and criticized are, however, mere details, which do not appreciably detract from the high character of the work. The Atlas deserves, and will surely have, a wide circulation; and we are confident that no one will rise from its careful perusal without having obtained clearer, more accurate, and more intelligent views in regard to the much-vexed questions of female anatomy, or without having formed a very high opinion of the author's industry, earnestness, and ability.

Diseases of the Brain and Spinal Cord: a Guide to their Pathology, Diagnosis, and Treatment. By DAVID DRUMMOND, M.A., M.D., Physician and Pathologist to the Newcastle-upon-Tyne Infirmary, etc. London: Henry Kimpton: 1883.

DR DRUMMOND offers this book under the impression that "the increasing interest taken in nervous diseases has created a demand for a work that shall be accessible in a reasonable compass to the student, and to the busy practitioner whose engagements do not admit of the leisure necessary to master voluminous works." We are not sure whether medical readers of a different class may not find something which they want in this book. The student will probably find it his wisest plan to stick to a single work on the practice of medicine; and the busy practitioner would probably prefer a book which he could consult under the certainty that he would find the information which he sought. The small size of this book shows at once that it is far from being a complete treatise upon the subjects which it discusses. It is an octavo volume, by no means closely printed, containing 414 pages. 40 of these pages are occupied by the index; 41 by a sketch of the anatomy and functions of the encephalon; and 11 by a similar description of the spinal cord. 190 pages are taken up with diseases of the brain and nerves; and 129 by the diseases of the spinal cord. Thus, relatively speaking, Dr Drummond gives more space to the diseases of the cord than to those of the brain, and in our opinion this portion of his work is the best done. The description of the different columns and zones of the spinal cord is really good, much better from a medical point of view than that in the eighth edition of Quain, with which we have compared it. There has been great progress in the study of disease of the spinal cord within the last eight or ten years. The author has throughout his sketch shown great judgment in choosing what is important and useful, and in escaping from superfluous details.

Many diseases of the brain are not even mentioned. He principally deals with those which come the way of the ordinary practitioner, such as apoplexy, meningitis, hydrocephalus, cerebral anæmia, and hyperæmia.

The book is well written, and will be read with interest by any medical man who wishes to refresh his memory by going over some chapters on the diseases of the nervous system, and to gain the latest information on a number of subjects that are growing in interest and importance, and assuming a more definite form. The first illustration is a coloured lithograph of the ophthalmoscopic appearance of optic neuritis. The others, fifty in number, are somewhat rough but effective woodcuts, which are well designed to bring out what the author wishes to teach. Though Dr Drummond acknowledges himself to be largely indebted to the writings of distinguished neurologists, it is evident that he himself has, by original observation and study, gained a close acquaintance with the affections of the whole nervous system. The only special criticism in which we venture to indulge is on the following passage:—"Too much stress should not be laid upon the tache cérébral, *i.e.*, red line left by the finger when drawn along the skin, for although it is a sign of importance (Trosseau), it cannot at the same time be regarded as pathognomonic of tubercular meningitis, being occasionally present in other affections." We are willing to suppose that the misspelling of the word "cérébrale" and of Trousseau's name are but instances of mistakes in the printing of foreign words; but it would have been better if Dr Drummond, instead of a vague and confusing statement, had explained the usual significance of this phenomenon, which is certainly apt to occur whenever there is great congestion of the membranes or upper strata of the brain. Whoever said that it was pathognomonic of tubercular meningitis, it certainly was not Trousseau. A novel feature in this book is that the alphabetical index is at the beginning; a table of contents is thus saved. Sometimes subjects are indicated under names or adjectives which would not readily present themselves to the mind of those in search of special information; but this is a common fault of index makers, and on the whole Dr Drummond's is an unusually good index.

A Treatise on Surgery: its Principles and Practice. By T. HOLMES, M.A. Cantab., Surgeon to St George's Hospital. Fourth Edition. London: Smith, Elder, & Co.: 1884.

WE have again to welcome a new edition of this excellent work on surgery. It has the great advantage of being short—if we can call a large volume of nearly 1000 closely printed pages short—at least it is complete, precise, well illustrated, and in one volume, instead of four or five. It has the same line of teaching as we find in the large dictionary edited by the author; but for a student, the unity of method and the similarity of diction in the whole work make this much easier as well as much shorter to read. The illustrations are instructive; most of them are, of course, old friends; but the work seems fairly brought down or up to the level of present day. The younger surgeons may think too little is said of the newer operations, such as nephrectomy or gastrostomy.

A Dozen Papers Relating to Disease-Prevention. (Illustrated.) By CORNELIUS B. FOX, M.D., F.R.C.P. Lond. London: J. & A. Churchill: 1884.

UNDER this heading Dr Fox, late medical officer of health of East, Central, and South Essex has collected a number of his papers written between 1873 and 1883, most of which have already appeared elsewhere. In the article on "The Impairment of the Efficiency of the Medical Officer of Health, produced by his want of Independence as a Public Official," the defects of the whole present system are well shown. In "Coke as a Fuel in Relation to Hygiene," we have a brief but graphic sketch of the evils attendant on burning coke in cast-iron stoves, and recommendations given as to how these may, to a certain extent, be remedied. In reply to the question, "Is Enteric Fever ever Spontaneously Generated?" which forms the subject of one of the papers, Dr Fox says, "I do not express the opinion that the poison of typhoid fever is capable of spontaneous development, for we do not at present possess sufficient evidence to come to any decision on the matter. Although, if my mind be prejudiced at all in the matter, it is prejudiced in favour of the more philosophic view that enteric fever never arises spontaneously, yet my judgment points to the opposite conclusions. Just as the poison producing ague is generated in, and emitted by earth laden with decomposing organic matters under certain states of climate and soil, so the poison of this fever may arise from some unknown changes in the excremental matters of flesh-eating animals under certain atmospheric conditions and spread by contagion." In the last article,—one of the two of the series not previously published,—the electroplated drinking flask is pointed out as a hitherto unrecognised source of copper poisoning—the sherry which had been permitted to remain in one of these flasks for some time giving unmistakable evidence of the presence of copper.

The collection as a whole is a series of sound and instructive articles, all pertaining to the subject of public health with the exception of the penultimate paper—the title of which, "How to keep the External Ear in a Healthy State," proclaims it to be strangely out of place in such a group.

Medical Fashions in the Nineteenth Century, including a Sketch of Bacterio-Mania and the Battle of the Bacilli. By EDWARD T. TIBBETS, M.D. Lond., Physician to the Bradford Infirmary. London: H. K. Lewis: 1884.

IT is almost surprising that the author of this little work does not, in the course of it, quote some of the teaching contained in the first chapter of Ecclesiastes, inasmuch as his opinions seem, to a considerable extent, to be fashioned after the same manner as those of the royal author. No doubt it is an advantage to have amongst us some one who is reactionary or conservative in his leanings, but we are free to confess that we think Dr Tibbets goes much too far. It is curious to find a scientific physician in the year 1884 giving utterance to the following among other doctrines:—"The modern theory of the action of digitalis is, I believe, a dangerous one. The sooner we revert to the antiquated notion of our forefathers, viz., that digitalis is a sedative and depressant, the better will it be for our patients, as well as for our reputation as medical practitioners." Notwithstanding that we cannot in the main agree with the author, it has been a pleasure to read his little book. The part of it devoted to the criticism of some of the modern developments of the germ-theory is the most interesting portion of the volume, notwithstanding that some of its judgments are couched in language unnecessarily severe; as, for example, when the author speaks of M. Pasteur as "a gentleman who was evidently suffering from the intoxication of popularity." It is useful to be reminded that

"Our little systems have their day;
They have their day, and cease to be."

But in doing this it is surely well to remember and recognise the enormous strides made by medicine and surgery during the present century.

TERCENTENARY LITERATURE.

We have received of the lighter kind of sketches:—

1. *Sketches at the Tercentenary of Edinburgh University.* By F. D. N. Edinburgh: Young J. Pentland: 1884.

These include portraits, fairly like, of the Lord Rector, the Lord Provost, the Principal opening a soda-water bottle, Professor Maclagan singing a song, some of the actors in the students' play, and one or two heads of well-known teachers. It is neatly got up, well drawn, and too good to be called a caricature.

2. *Tercentenary Celebration: The Procession.* Edinburgh: George P. Johnstone: 1884.

This is another, and much larger, gallery of portraits, including the chief officials of the University, all the medical professors, the Extra-mural Medical School, a few professors in other Scotch universities, and a selection from the more distinguished guests. They are drawn in the broadest and vulgarest caricature, evidently by some one who has known by sight even very few of the victims, but has had to trust to photographs; and who has been assisted by some one in the outskirts of the profession, who knew something of the pursuits and special characteristics of the sufferers.

Some of the likenesses are fairly caught, among the best being a professor of midwifery, an extra-mural lecturer on physiology, and a health lecturer on hereditary genius.

3. *Viri Illustres. Acad. Jacob. Sext. Scot. Reg. Anno CCCmo.* Edinburgi: apud Y. J. Pentland: 1884.

This is an admirably got up, well-written, and well-arranged list of the famous men of the past 300 years of the University. From six to ten lines of their history, with their names and dates. A most useful little volume.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXIII.—MEETING VI.

Wednesday, 2nd April 1884.—Dr LITTLEJOHN, *President, in the Chair.*

I. ELECTION OF ORDINARY MEMBERS.

Alex. Thom, jun., M.D., C.M. Ed., M.A. St And., Crieff, and Hugh L. Calder, M.B. and C.M., Leith, were elected Ordinary Members of the Society.

II. ELECTION OF HONORARY MEMBERS.

Sir William Jenner, Bart., London, and Professor Brown Sequard, Paris, were elected Honorary Members.

III. ELECTION OF CORRESPONDING MEMBERS.

Professor Pasteur, Professor Pettenkoffer, Professor Ollier, Professor Ask, and Dr Fordyce Barker, were elected Foreign Corresponding Members.

Sir J. Lister, Bart., Sir J. Fayrer, K.C.S.I., Dr J. Matthews Duncan, Dr J. Syer Bristowe, John Eric Erichsen, F.R.C.S., John Marshall, F.R.C.S., Professor Struthers, and Professor Gairdner, were elected Corresponding Members within the United Kingdom.

IV. EXHIBITION OF PATIENT.

Dr W. A. Finlay showed a patient who was the subject of AMPUTATION AT THE HIP-JOINT FOR ACUTE DISEASE. The operation was performed, after consultation with Dr Watson, eight months ago, in the following manner:—An incision was made down to the bone, commencing about an inch above the acetabulum and extending along the neck of the femur and the centre of the great trochanter, to a point below its inferior border. The soft parts were then dissected from the bone, and the head of the bone was removed from the acetabulum. At this point it became evident that the disease involved, as was anticipated, so much of the shaft of the femur as to render amputation necessary. The incision was therefore extended down the outer side of the femur as far as seemed necessary to obtain sufficient length of flaps. At this stage of the operation an elastic band was applied firmly round the soft parts, between the pelvis and the dislocated femur. The flaps were then completed by transfixion, the limb was removed, and the vessels tied with scarcely any loss of blood. Five months later, viz., at the end of last December, a large piece of necrosed bone was removed from the acetabulum, and a considerable quantity of carious bone gouged away from the ischium. The cicatrix of the incision necessary for this operation, which was somewhat tedious, was seen in the posterior flap over the acetabulum. There was still a very slight dampness on the dressing, but no sign of there being any further disease of the bone. The patient was one of a strumous family and small of his age, which was stated to be 16 years. He was admitted to Leith Hospital on June 8th. Up till three days before admission he had been quite well, but on the morning of June 5th he felt a slight pain in the right inguinal region. This pain increased in severity during the day and caused him to leave his work, to which he had gone in the morning. On admission there was found to be some swelling at the seat of the pain, which was extreme. The swelling gradually increased and, on the 10th of July, 20 ounces of pus were evacuated by an incision in front of the thigh, where deep-seated fluctuation was well marked. On July 22nd the limb was amputated at the hip-joint as already described. Thus only forty-seven days had elapsed from the time he first felt the pain until the date of the amputation. With reference to the means employed to command the hæmorrhage, Dr Finlay could not speak too highly of the efficacy and simplicity of the elastic tourniquêt used in the manner suggested to him by Dr Watson.

V. Exhibition of Pathological Specimens.

1. *Dr W. A. Finlay* showed the HEAD AND NECK OF THE FEMUR from his case of amputation for hip-disease. In the space of forty-seven days the disease had completely divided the head of the bone, as was seen in the specimen.

2. *Dr C. W. MacGillivray* showed ONE-HALF OF THE LOWER JAW REMOVED FOR MALIGNANT TUMOUR. The preparation was interesting chiefly because of the history of the case. About a year before, a small epithelioma of the lip had been removed by another surgeon in the hospital. Nine months later a tumour appeared on the side of the jaw. It appeared to be a sarcoma of the jaw; but the history made the diagnosis somewhat more difficult. The operation showed that the first surmise was correct. The patient had gone on well.

3. *Prof. Chiene* showed (1) A CALCULUS from a boy, aged 5 years,

who had been sent by Dr Hutchinson of Cockermouth, with the history that he had very frequently to make water during the day and night. On Nov. 14 of last year, under chloroform, a small sound was with difficulty passed into the bladder. A grating sensation was felt as it passed through the membranous urethra. No stone could be detected in the bladder. But by the rectum a stone was felt lying in the membranous urethra. A staff was then passed as far as the calculus, an incision was made in the raphe of the perineum, and membranous urethra opened into. An attempt was then made, with the finger in the rectum, to push the stone out of the wound, but it now slipped back into the bladder. An incision was then made through the prostate, and the stone was removed. The thicker end of the stone was in the bladder, the other end forming a mould of the membranous portion of the urethra. (2) AN OVARY which he had removed from a child aged 3 months, who had been sent into hospital by Dr Spence of Burntisland. A swelling appeared quite suddenly in the inguinal region, the mother says, on the night of the 7th February. It was not noticed at 7 P.M., when child was put to sleep, but at 10 P.M., when child's clothes were being changed, she noticed the swelling. Dr Spence applied hot cloths, and under chloroform attempted to reduce the swelling, but did not succeed. Three days after swelling appeared child was brought to the hospital. The mother says the swelling was no larger then than when it first appeared. Its bowels have been quite regular all the time. On the 11th and 12th of February, hot fomentations applied by Mr Chiene's directions. On the 13th the child was put under chloroform. An incision was made over the swelling, and the sac dissected down to and opened. A ligature was placed round the proximal end of contents, and the neck of the contents divided, and the contents removed. The mass excised was found to be an ovary with Fallopian tube. The wound healed by first intention, and patient left on the 19th of February.

4. *The President* showed THE PARTS INJURED IN A CASE OF CUT THROAT.—The case was interesting in its medico-legal relations. The larynx was extensively mutilated. The thyroid cartilage, which was implicated, was broken up, being divided transversely, and the left superior cornu was detached. The lower third of the cartilage together with the crico-thyroid membrane was awanting. The wound in the skin, which measured 5 inches across, passed obliquely upwards on the left side, and at each end of the wound there were several slight incisions, showing that several attempts had been made. On the right side the sterno-mastoid muscle was almost completely divided, but neither the artery vein nor *descendens noni* nerve were injured. On the left side the sterno-mastoid was completely divided. The common carotid was exposed below its division but not injured, while the internal jugular vein was cut

transversely but not completely divided. The *descendens noni* nerve was exposed but not injured. The patient was a street porter, æt. 64, who for some days was strange in his manner and had excited the suspicions of his friends. He left his home after breakfast apparently well. He was found accidentally by a message boy, at seven in the evening, in an area of a dwelling-house half a mile distant from his home. He was in a half-sitting position and quite dead. A large knife used for cutting ham was found smeared with blood about seven yards from the body. This knife belonged to himself, and he had been observed narrowly examining it. What took him to the locality was never ascertained. Through the kindness of Dr Keiller, the parts in a similar case of extensive laryngeal mutilation were shown. The case was reported to the Society and published in the *Edinburgh Medical Journal* for December 1855. Both these cases were suicidal, as was proved by various circumstances; but the peculiar mutilation, which was rare, pointed either to suicide or the effects of delirium arising from drink or insanity. It was interesting to note that in Dr Keiller's case the patient was a victim to delirium tremens, while in the present there could be little doubt that insanity was the cause of the suicide.

Mr Joseph Bell reminded the President that he had once been associated with him in a very remarkable case of suicidal mutilation of the larynx, in some respects not unlike the one now shown. Had the man not been actually seen to cut his throat, it would have been exceedingly difficult to believe that he had done it himself. He was a patient in one of the wards of the Infirmary. Two other patients saw him thrust a small blunt pocket knife, used for cutting tobacco, into his throat and actually cut or haggle out from behind. He wounded a large vessel. One of the patients stopped the bleeding by putting his finger on the part. Mr Bell had to tie the carotid; but the patient died eventually of intra-lobular suppurative pneumonia.

VI. EXHIBITION OF OTHER SPECIMENS.

1. *Prof. Chiene* showed a PHOTOGRAPH OF A CHAIR, which, along with an escritoire, had been presented to the University of Edinburgh to be kept in the surgical department. These articles belonged to the late John Hunter, and had been presented by the representatives of the late Professor Goodsir. The chair was one of twelve made of the wood of the *Acacia melanoxylon* which had been brought home by Joseph (afterwards Sir Joseph) Banks when he was botanist in Captain Cook's expedition. The wood was presented to John Hunter, who got twelve drawing-room chairs made of it. Sometime after Hunter's death the chairs were found in a lumber room below the College of Surgeons in London. The late Mr Stone got the desk and advised Mr Goodsir of the sale of the chairs. Mr Goodsir commissioned him to purchase three, and

offered him double of what he paid for the writing-desk, which offer was accepted. The late Mr Frank Buckland had a chair made out of the wood of Hunter's bed, which was now in the possession of Mrs Buckland. After her death, be believed, it was to go to St George's Hospital.

2. *Dr Church* showed A STUD, about the size of a shilling, which had been swallowed by a child two years of age. The parents were about to administer purgative medicine; but he had dissuaded, and the stud passed naturally and without injury to the child in two days.

3. *Dr Foulis* gave a demonstration of the circulation in the gills of the tadpole.

VII. ORIGINAL COMMUNICATIONS.

Dr A. Bruce read his paper on CHRONIC POISONING BY BISULPHIDE OF CARBON, which appeared on page 1009 of this Journal for May.

The President said he was sure the Society was much pleased with the manner in which Dr Bruce had narrated those interesting cases. When the paper was published they would be able to study the peculiar symptoms more carefully and as they deserved. From foreign sources he was aware of the effects of bisulphide of carbon poisoning; but up to the present they were unknown in English works. It was very interesting to find these cases turning up in Edinburgh, and being described by a competent observer. It was somewhat remarkable that while the use of bisulphide of carbon in rubber works in Edinburgh had not been made the subject of public complaint, that of the spirit of petroleum, which had been substituted for it, had, and it had been his duty to communicate with the directors of this work that they might take steps to prevent such escape, which was becoming a great nuisance, though perhaps not directly injurious to health. The present cases had evidently been most carefully observed. It would have been interesting to have noted the effects of the poison on the female constitution, but, he supposed, women were not engaged in this work and therefore not exposed to it.

Dr Craig was sorry be could not add very much of importance to the discussion which was so ably introduced by the President. Dr Bruce's cases were extremely interesting and exceedingly rare, at all events, to such an extent as these men had suffered. He had not himself met with any instances of this poisoning, though he had attended not a few of those engaged in these works. No cases had come under his notice that he could trace to such a source. He should like to ask Dr Bruce if he knew how long the bisulphide of carbon had been used, also, if any, and what proportion of the workers showed an immunity to the effects of the vapour. The treatment that had been adopted was very successful. He thought that if he got a case of the kind he should like to try phosphorus, which was a strong nervine tonic. It was interesting to note that in America the bisulphide of carbon was used as an external application in such cases as deafness from a deficiency of wax or nervous affections, in tic and other neuralgias, and was said to be very successful. It was one of the officinal remedies of the U.S. Pharmacopœia.

Mr Joseph Bell said the cases reminded one of the curious symptoms observed in post-diphtheritic paralysis. He believed that the pathology of this malady was now held to be a paralytic condition commencing in the vasomotor system. Might not this poison cause a similar vasomoter disturbance which would lead to the symptoms described?

Dr P. A. Young was struck with one of the symptoms mentioned by Dr Bruce. It was the feeling, complained of by all three men, of a tightness or band round the head. Such "iron-band" symptom was familiar to them as occurring in a variety of diseases. A case in which this symptom was very marked came under his notice a good many years ago. The patient, a man, suffered great agony, and when first seen by Dr Young was, on account of the severity of the pain, dashing his head against the bed. He was not quite sure as to the cause, and was at his wit's end to know what to do with him, as all ordinary remedies failed to give relief. It so happened that he had been reading in an American paper of the use of bisulphide of carbon in neuralgias and headaches. He accordingly applied it as recommended. Putting ten drops on a little wadding in a wine-glass he held it to the man's forehead, where the pain was most intense, till the leech-bite sensation was produced. The pain then ceased and was only felt behind, where another application of the remedy also relieved it. It recurred but once, and was speedily overcome in the same way.

Dr Argyll Robertson said that in listening to this able and instructive paper he was particularly struck by one symptom complained of by one of the patients, a very peculiar visual phenomenon—everything appearing of a greenish or bluish-green colour, and after the application of a drop of atropine a change, lasting for twenty-four hours, in which everything appeared of a reddish tint. It was difficult to give an explanation of these phenomena. Coloured vision was very rare in eye affections. In addition there was the extraordinary dimness which a simple defect in the refracting media would not account for. They sometimes had patients complaining of coloured vision when blood was extravasated into the anterior chamber; but in such cases the ophthalmoscopic examination very soon revealed the nature of the lesion. Besides, the colour in this instance was not typically that due to the presence of blood or blood-colouring matter in the media of the eye. They must therefore exclude that. They did occasionally find other cases of coloured vision. One was the familiar poisoning of the nervous system by santonin. Another form of coloured vision of considerable interest might result from accidents in which the nervous system has got a severe shock. He remembered well reading an account of a medico-legal case, described, he thought, by Wharton Jones, in which a man got considerable damages from a railway company, on account, not of impaired sight, but of coloured vision, occurring after a railway accident. His occupation having been that of a grain-dealer, it was of importance to him to have a good clear vision; but after the accident everything had a yellowish tinge, so that he was unable to distinguish the various kinds of grain. Except these three different causes, so far as he was aware, he was not acquainted with any other that gave rise to coloured vision. It was very interesting to note that in this case it seemed due to poisoning of the nervous system by the vapour of bisulphide of carbon. He did not know if it had occurred in other cases, but it would be interesting to observe whether the same symptoms appeared or not. It was curious that in one of the cases, in which the nerve symptoms were greater, this coloured vision did not exist; but it was possible that different parts of the nervous system might be affected in certain individuals, and that in this instance the optic nerves chiefly suffered.

Dr James asked Dr Bruce if he had any explanation to give regarding the curious effect of the atropine. The bisulphide of carbon appeared to have caused the greenish hue; the atropine, on the contrary, brought out the colour which was the complementary of green, namely, the reddish tint. It appeared as if the atropine had some opposite effect to that of bisulphide of carbon, but it was a matter on which a good deal might be theorized.

Dr Hare asked what was the pathology of this condition, was it purely functional or had it any organic substratum? He was inclined to take the former view, and was rather of opinion that the symptoms might be explained as due to a constant hyperstimulation of peripheral end-organs, more particularly the olfactory. He would like to know if Dr Bruce had thought of such an explanation.

Dr Bruce, in reply, said that the French physician, who first described these cases as they had occurred in Paris, recommended the internal administration of phosphorus along with faradisation. He had, and he thought wisely, kept clear of theories regarding pathology, because, so far as he knew, no case of chronic poisoning had proved fatal. He had theorized a good deal about it, but Dr Hare's explanation had not struck him. It seemed to him that there was a saturation of the whole system, seeing that the bisulphide was excreted by the skin, lungs, and kidneys. Bisulphide of carbon was a solvent of fats, and apart from the emaciation produced by loss of appetite and vomiting, it might be that the fat was actually dissolved out of the body, but he had no means of proving that. With reference to the tight feeling round the head, he thought it might partly be due to the vapour getting into the frontal sinuses; but that also was a thing which he could not prove. He agreed with Dr Robertson that the dimness and coloured vision were due to poisoning of the nervous system. He had formed no theory regarding the very remarkable effect of atropine. This case was the first, so far as he knew, in which the green vision had been noticed. Others had suffered from defective sight. With regard to other questions, the bisulphide had been used for four years in the works. The first patient was the first man to work in it. During the first two and a half years he did not seem to have been constantly in the room. Some other men who were beginning to be affected took fright and left. These three were the only severe cases; but every other man who worked in the room suffered to a slight extent. They worked for a month or two, then the vomiting and other symptoms of prostration began to show.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLV.—MEETING V.

Wednesday, 12th March 1884.—Dr Wilson *in the Chair.*

I. *Professor Simpson* showed the TUMOUR and BLADDER attached of the case of Porro's operation which he was about to describe.

II. *Professor Simpson* read an account of a CASE OF PORRO'S OPERATION, which will appear in a future number of this Journal.

III. *Surgeon-Major Arnott,* Bombay Medical Department, read an account of THREE CASES OF CÆSAREAN SECTION, which will appear in a future number of this Journal.

Dr Halliday Croom felt that it was difficult to express any definite opinion as to the case of Porro, as he had seen no cases save that done by Dr Simpson. He asked Dr Simpson whether he still thought it good practice to apply the ligature tightly round the cervix before removing the child. Of course, he quite admitted that the tedious labour in this case was quite sufficient to account for the untoward result, but he felt that the chances might be improved, so far as the child was concerned, by leaving the ligature loose until the removal of the fœtus. From Dr Arnott's cases it would seem that the results of the Cæsarean operation were almost as good as those of Porro, but there must always be a certain advantage in having the stump external. He was surprised to find there was no great hæmorrhage in the case in which Dr Arnott cut into the placenta. He believed that Dr Arnott's success in saving the children was due to his removing them before interfering with the cervix.

Dr Berry Hart asked Dr Simpson whether it was not likely that the shortness of and tension on the pedicle were not sufficient to account for the untoward result. He thought at the time that the pedicle was too short, and he now believed that a better result would have been obtained had a part of the uterus been clamped as well. He asked Dr Arnott what he did with the ends of the silver sutures, whether he cut them short or left them long. He advised Dr Arnott to try Porro's operation in his next case.

Dr Underhill had read of several cases in which silver sutures had been left in, and where they had become encysted.

Dr Peter Young had made a series of experiments on rats some time ago as to the results of employing silver sutures, and in nearly every case he had found them encysted and giving rise to no trouble. In Dr Simpson's case he had no doubt that the unfavourable result was in great measure brought about by the tumour, which, being left in, had undoubtedly kept up unhealthy action. He had no doubt but that Porro's was the best operation under these circumstances.

Dr Barbour referred to the impossibility of effecting drainage in Dr Simpson's case, owing to the position and nature of the pedicle. Owing to its mode of attachment it was impossible to put a drainage-tube below it, and this ought to be taken into account in commenting on the case.

Professor Simpson said that had he had more consideration for Porro's operation and less for the woman he would not have performed it in this case. The mother was much exhausted by her prolonged labour, and the child was probably dead before he began. He admitted that it was a pity he could not have a longer pedicle, but he had difficulty in applying the ligature at all, on account of the position of the child's head, and the nature of the pedicle obtained prevented the application of the drainage-tube. However desirable, it was quite impossible to attempt removal of the tumour. Dr Arnott's cases are extremely interesting. Malacosteon is a very rare disease here, but he thought Dr Arnott would find it advisable to remove uterus and ovaries in future, as the experience of the Italian operators goes to show that the disease is stopped by this procedure. Sanger makes a good suggestion as to the closing of the wound, namely, to dissect off the peritoneal membrane from the uterine wall, to cut a wedge-shaped portion from the edge of the muscular walls, and bringing them together, and thus permit the peritoneum to unite by a flat surface instead of a mere edge. It should be noted, in reference to this case, that the important condition of early operation was absent, and the albuminous condition of the urine was extremely unfavourable.

Dr Arnott said that in Cæsarean section the hæmorrhage occurred from the uterine walls rather than from the placenta. He did not think the difficulties of the operation were much increased if the placenta happened to be placed on the line of incision. Of course he would now use silk in all cases in preference to silver for sutures. With regard to the stump in Dr Simpson's case, it seemed to him that the difficulty was due rather to the bulging of the tumour than to the shortness of the stump. He thought that quickness in operating was of the highest importance in saving the child. He had been struck by the frequency of malacosteon in India. It was rare in primiparæ. It usually occurred in multiparæ, and they almost invariably referred their altered health to the effects of the previous pregnancy. It was a curious circumstance that the condition affected Mussulman women more frequently than Hindoos.

IV. *Dr Barbour* read a paper on THE ANATOMY OF THE POST-PARTUM UTERUS, which will appear in a future number of this Journal.

Dr Wilson felt sure that it had given the Society much pleasure to listen to so valuable a contribution to this important subject.

Professor Simpson did not think that this was a paper which lent itself to discussion. At the same time it was one which embodied many valuable results. It was especially interesting as bearing on the subject of placental detachment. Alhfeldt had attempted to demonstrate that in the separation of the placenta detachment commenced in the middle, a hæmorrhage then occurred and acted like a hæmatoma. So far Dr Barbour's and Alhfeldt's results agreed. The paper was further of importance in calling attention to the great amount of cellular tissue in the pelvis, and in explaining the tendency in primiparæ to develop abscesses.

Dr Berry Hart considered the paper a valuable one in elucidating some points not hitherto clearly understood regarding the arrangement of the membranes after the child was born. He held, with Engelmann, that wrinkling of the membrane takes place, and this observation had demonstrated the partial separation of the chorion.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

MULLEIN IN THE TREATMENT OF PHTHISIS.—Professor Quinlan of Dublin, in the *British Medical Journal* for 5th April, recommends the leaves of mullein (*Verbascum thapsus*) to be smoked for the cough of phthisis. Whenever the cough comes on he recommends a pipe to be filled with the dried leaves, broken up into a kind of coarse snuff, and smoked. He says, "The flavour of the leaf is not disagreeable. It can be used either in an ordinary pipe or in paper cigarettes, and might be found useful in asthma and spasmodic coughs in general."

NAPHTHOL IN THE TREATMENT OF SCABIES.—Dr Samuel Rona treated twenty-one cases of scabies exclusively with naphthol ointment, and reports his observations as follows:—The patient is stripped of his clothing, and the places where the disease is most frequently found covered with naphthol ointment, and later on the patient is completely covered with the ointment (save the head and neck). The inunction in the above cases was made in the evening. In the morning is bathed, and the reddened surface covered with rice powder. After the first application the patients are usually discharged as cured. Only the first five of the cases were retained for eight or ten days, for the purpose of observation. The intense itching caused by the disease persisted for two or three days frequently, but it was attributed to the eczema. Rona endorses the views of Kaposi, namely, that naphthol is more efficient than all the other remedies combined. Naphthalin, recently recommended by Fürbringer, does not excel naphthol. When speaking of one application as being sufficient to relieve scabies, it must be borne in mind that the application must be a most thorough one, otherwise it may necessitate two or three. Naphthol may be safely applied in ten to fifteen per cent. ointment. Rona has used it in 100 cases without observing a single toxic or unpleasant symptom. If given in a concentrated form it causes symptoms of irritation and eczema. In chronic eczema the strength of the ointment should not exceed two to three per cent. Rona usually prescribes it in the following formula:—

℞	Naphtholi puræ,	15·0
	Ung. simpl.,	100·0
	Sap. vir.,	50·0
	Cretæ pulv.,	5·0
		M.

(*Pest. Med. Chir. Presse.*)—*Therapeutic Gazette*, March 1884.

CROTON OIL—ITS ACTIVE PRINCIPLES.—The pure expressed croton oil can be separated into two parts by means of alcohol. The part that is soluble in alcohol contains the principle that acts as an irritant to the alimentary canal, while the insoluble portion does not contain any active principles at all. The general opinion of the action of croton oil has been that the cathartic action of this oil has been attributed to the irritating properties of the oil. Quite recently Dr Meek has made a series of experiments, proving that the active principle is found in the portion of the oil which is insoluble in alcohol. The experiments consisted in washing the oil quite a number of times with alcohol in order to dissolve, and separate all the soluble particles, and make the insoluble part into pills. The result was, when a small dose was administered only a laxative effect was produced, but a larger dose produced only a correspondingly greater effect, but without causing any unpleasant symptoms. The author completed his experiments by giving equally large doses of the two preparations under circumstances as nearly alike as possible. With the soluble preparation he obtained no laxative effects at all, but a considerable amount of irritation of the alimentary canal, and a great deal of nausea, while the other preparation produced catharsis without any unpleasant effect whatever. According to the observations of the author, it may become possible that croton oil can be made a sure, efficient, and pleasant cathartic. There is no doubt that croton oil can be separated into two parts, one containing the irritating and the other the purgative principle. It has also been conclusively proven that the irritating properties of croton oil soluble in alcohol are not due to a free acid, but are made up of non-volatile fatty acids. (*Pharm. Post*).—*Therapeutic Gazette*, March 1884.

STRYCHNIA FOR UTERINE INERTIA.—The *Medical and Surgical Reporter* quotes from a report in the *Journal de Méd. de Paris*, in which strychnia is recommended as a substitute for ergot in parturition. When the cervix is dilated and there is uterine inertia, a dose of the 1-130th of a grain of the sulphate of strychnia is to be given every ten minutes, the interval between the doses being increased as the head descends. Dr Deghilage, who contributes this report, gives strychnia thus administered the preference to the forceps, the expulsive pains being very effective, and hemorrhage being less likely to supervene than when the instruments are employed.—*Therapeutic Gazette*, March 1884.

HYOSCYAMINE IN INSANITY.—Dr Henry M. Hurd, of the Eastern Michigan Asylum, states (*American Journal of Insanity*) that Merk's amorphous hyoscyamine, in doses of $\frac{1}{32}$ to $\frac{1}{16}$ of a grain, controls convulsive seizures, and prevents excitement or irritability. In a discussion regarding the merits of this drug by the Canadian Medical Association in September last, Dr Metcalfe of Kingston said, that used hypodermically, hyoscyamine acted more quickly and surely than any other narcotic. He gives from $\frac{1}{12}$ to $\frac{1}{16}$ of a grain hypodermically. Maniacs require larger doses than melancholics. Dr Hurd of Pontiac, Dr Clark of Toronto, and Dr Troutman of New York, commended the drug highly in mania and melancholia (*Practitioner*, xxxii. 367).—*Canada Medical and Surgical Journal*, September 1883.—The *Practitioner*, April 1884.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

ECZEMA OF THE PALMS AND SOLES.—It is a very generally received opinion that an eruption limited to the palms and soles is invariably syphilitic. This is not the case, however, although it may be safely affirmed that in this situation we have either to deal with syphilis, psoriasis, or eczema. When eczema occurs between the toes it is often very troublesome, not only because these parts are in constant motion, but because they are in contact and rub against one another, and because the perspiration is confined, decomposes, and acts as an irritant. Itching is very troublesome, and pain often complained of, owing to the presence of fissures. The cuticle is thickened, white, like that of a washer-woman's hand after a day's washing, and separates in large flakes. The secretion is often abundant and offensive, when the eruption attacks the fingers and toes, and is complicated with painful fissures. It is advisable to commence the treatment by bandaging each finger or toe individually with narrow strips of linen, spread with a soothing ointment, and kept in position by gloves or stockings. The dressings must be changed night and morning, and the loose epidermis and *débris* removed with firm friction, so that the new ointment may come into direct contact with the morbid surface, and to avoid subsequent itching. If, after the fissures have healed, the eruption does not improve, it sometimes yields in a few days to lotions of carbolic acid. At Dr Unna of Hamburg's suggestion, Beiersdorf, 22 Mühlenstrasse, has introduced a series of plasters spread on muslin, the basis of which is gutta-percha combined with a great variety of drugs. These plasters are soft, pliable, and waterproof, and some of them, especially the oxide of zinc plaster, are of great value in the treatment of eczema of the palms and soles. The plaster used must be a soothing one if the eruption is acute; if chronic, a stimulating one may be employed. It should be cut into narrow strips, and the parts firmly and smoothly bound with it. It may often be left on for days, and only changed if it gives signs of getting frayed, displaced, or deteriorated. A cure at times results from a single application of the emplastrum zinci.—*Journal of Cutaneous and Venereal Diseases*, October and November 1883.

XANTHOMA DIABETICUM.—Mr Malcolm Morris has described a case, of which only three similar have been previously observed. The eruption seems allied to xanthoma or xanthelasma, but differs from it inasmuch as the eyelids are unaffected, and the eruption tends gradually to disappear instead of being permanent, as that of xanthelasma is in at least the majority of cases. The disease has so far been seen only in diabetic subjects. Three of the persons affected were males, one female. The lesions were firm and solid, not soft, as in xanthoma, and only a portion were yellow. The spots, too, were in many instances in the immediate neighbourhood of hair follicles, a condition not observed in xanthoma. There was no jaundice in these cases, which usually precedes or accompanies xanthoma multiplex in the *adult*. The disease is a singular one, and deserves further attention being paid to it.—*Transactions of the Pathological Society of London*, 1883.

THE TREATMENT OF LUPUS.—Professor Doutrelepont of Bonn regards lupus as a tuberculosis of the skin, and confirms Neisser's observations as to the presence of the tubercle bacillus. As a rule, however, the bacillus is but sparingly to be found. Acting on this view, he considers that in the treatment of lupus, besides the destruction of the cell-growth occasioned by the bacillus, means should be taken to kill the organism, or at least to limit its further development. According to Koch's researches, corrosive sublimate is the strongest known parasiticide, and highly diluted the most effective antiseptic. In consideration of the long period during which its application might be needed, he began with a solution of 1 in 2000; but latterly has used 1 in 1000. Several folds of linen dipped in this solution and then squeezed were laid on the part affected with lupus, covered with gutta-percha, and secured in place with a bandage. This seldom caused so much burning as to necessitate a temporary discontinuance. Under its employment the fungating ulcerations flattened and disappeared, and cicatrization began at the edges. As examples, three illustrative cases are related.—*Monatshefte für praktische Dermatologie*, January 1884.

ACARUS SCABIEI.—Professor Berge has constructed a useful instrument for the detection of the acarus scabiei. It consists of a flattened needle, which is bent inferiorly into a horse-shoe shape, and furnished with a movable lens at its straight part. By this means the magnifying power can be employed while both hands are engaged in the little operation.—*St Petersburgher Wochenschrift*, No. 32.

FISSURED ECZEMA OF THE PALMS AND SOLES.—Shoemaker recommends the following ointment to be well rubbed in after softening the scales in hot water night and morning:—

℞	Hydrarg oleati (Shoemaker's formula),	℥ss.	
	Ol. cadini, ...	ʒss.	
	Cerati simplicis, ...	℥ss.	M.

—*Monatshefte für praktische Dermatologie*, December 1883.

OLEATES IN SKIN DISEASES.—Sawyer finds the oleate of copper valuable in mild cases of ringworm (he does not say in what locality). He uses it in the form of an ointment,—one drachm and a half of the oleate to six drachms and a half of petroleum jelly. Oleate of zinc as a dusting powder to the skin is a good remedy in cases of excessive sweating. When used for this purpose, the addition of one grain of thymol to the ounce, as suggested by Dr Morrell, is an improvement.—*Birmingham Medical Review*, February 1884.

A PERISCOPE OF MEDICINE, CLINICAL AND PATHOLOGICAL.

By G. A. GIBSON, M.D.

ALGID COLLAPSE.—Hallopeau, under the name of algid collapse, describes a condition characterized by partial or general coldness of the body, accompanied with prostration. He regards the condition as the opposite of what occurs in fevers, and that it is due to an opposite state of the vaso-motor nerves to that which is present in fever. The condition is specially observed in cases where the abdominal viscera are the seat of violent irritation, as in cholera, irritant poisoning, intestinal strangulation, and injuries to the abdomen. The lowering of the temperature usually begins in the extremities and face, and may be confined to these parts, but may become general. The contraction of the capillaries in these parts, and the consequent diminution in the amount of heat thus lost, would lead to the expectation that the internal temperature would be raised, which is not generally found to be the case, and this is explained on the supposition that there is a concomitant diminution in the activity of combustion. The pulse is small; the heart sounds are very feeble. The integuments are pale or cyanotic, and covered with a cold perspiration. There is often a degree of dyspnœa not explicable by respiratory lesion. The urine is diminished, and is often albuminous. There are muscular cramps; and the patient suffers from vertigo. He holds that the condition is due to the irritation of the sympathetic centre by the nerves going from the affected part, and through the sympathetic the calibre of the arteries is diminished; that by this means there is venous engorgement and deficient oxidation in the lungs, etc. He believes the condition is not to be explained by a general affection of the circulation, but is due to local disturbances in the circulation and the *colorification;* and this, he thinks, is proved by the symptoms of the collapse being limited to certain parts, particularly the face and extremities.—Summary in *La France Médicale,* 28th February 1884.

PNEUMONIC TYPHOID.—Hayem and Gilbert relate two cases of pneumonic typhoid. They do not agree with Liebermeister that the diagnosis is easy, especially in sporadic cases, although it is easier when epidemic. Indeed, they consider that the relation between typhoid fever and *pneumonie typhoide* has still to be established, and that it cannot be so established until the infectious agent has been separated in both diseases, and their unity or duality thus established.—*Archives Générales de Médecine,* March 1884.

FAT CRYSTALS IN FÆCES IN OBSTRUCTION TO THE PANCREATIC DUCT. — Ziehl says that fat is mixed with feculent discharges in the case of obstruction to the pancreatic duct in various forms: either as yellowish compact masses, as an oily fluid, or more rarely in the form of acicular crystals united in bundles, and which can only be found by microscopic examination. These crystals had been described by Friedreich in two cases. They are not crystals of tyrosin, as has been maintained by some; tyrosin crystals are light-brown, and are not soluble in ether, whereas these other crystals are clear and transparent, and are soluble in ether. And he records a case in which the presence of these crystals in the stools helped him to diagnose a case of malignant disease of the head of the pancreas. In it the motions, which were dry, formed, and silvery gray, contained a large quantity of microscopic needle-like crystals, which were either isolated or united in bundles, and which, after being dissolved in ether and then vaporized, left an abundant deposit of fat.—Abstract in *Archives Générales de Médecine*, March 1884.

THE DIFFERENT FORMS OF ACUTE PNEUMONIA AND THEIR MANAGEMENT.—Dr Francis Minot asserts that the belief that acute pneumonia is essentially a local inflammatory disease is fast disappearing, and that the self-limited and infectious nature of the disease, first maintained by Jürgensen of Tübingen, is replacing the old belief. He divides his cases into three classes—*first*, cases in healthy persons without distinction of age. In this class the initial stage of the fever lasts from twenty-four to forty-eight hours, and the fastigium usually seven days. These cases do well without any special treatment. He condemns the use of local applications, especially poultices; and advocates fresh air, that the clothing should be no heavier than is agreeable to the patient, and that he should not be urged to take more food than he likes. The *second* class is composed of healthy subjects who are debilitated from over-work, etc. The prognosis is doubtful in this class, and the disease is apt to spread from one lung to the other. The temperature falls more gradually than in the first class, and convalescence is more prolonged. Alcohol is usually required in these cases, and digitalis if there is pulmonary obstruction from cardiac failure; while brandy and carbonate of ammonia should be given if there is much exhaustion. The *third* class comprises cachectic individuals. The great majority of these die whatever treatment be adopted. They may be the subjects of renal or other chronic disease, of alcoholism, or prostrate from some antecedent acute disease. In these cases red hepatization is succeeded by purulent infiltration or gangrene. Here free stimulation is necessary, and food should be given in the liquid form.—*Boston Medical and Surgical Journal*, 21st Feb. 1884.

SURGICAL PERISCOPE.

By A. G. MILLER, F.R.C.S.E.

WIRING OF FRACTURED PATELLÆ.—In the *Medical Record* of New York is a paper on the above subject by Dr Fraser C. Fuller. He reports three successful cases: firstly, as evidence of the success of the operation in securing bony union of the fragments; and, secondly, as to the dependence of success upon antiseptic methods, the laying open of a knee-joint presenting the best of opportunities for testing the value of one special form of operating. The cases were compound comminuted fracture, simple fracture from muscular action, with wide laceration of the capsule, and simple fracture from muscular contraction with tilting of lower fragment. The method of operating was as follows:—1. There was almost constant irrigation with bichloride of mercury solution one to two thousand. 2. In the first case the existing wound was simply enlarged. In the other two cases a transverse incision was made, which Dr Fuller considers superior to a vertical one, as giving better access to the torn capsule, which he sews up. 3. The fragments are then bored close down to the articular surface, and united with silver wire or violin string prepared by Kocher's method. 4. A drainage-tube was placed at each extremity of the wound, being nearly as dependent a position as could be obtained, and the wound was sewn up first of the capsule, and then of the skin. 5. The wound was finally washed out through the drainage-tubes (indiarubber) and dressed with bichloride gauze dusted with iodoform. The limb was placed in a wire-splint, and swung. The result was most satisfactory in all the three cases. The new points about Dr Fuller's operation are the transverse incision, suturing the capsule, and turning down the ends of the wires between the fractured surfaces. The last proposal he prefers to hammering them down on the surface of the patellæ. On the transverse incision and suturing of the capsule he says, "Mr Lister and the other gentlemen in Great Britain who have done this operation all employ the vertical incision, and it is noticeable that they omit to say anything about the capsule. If the capsule is disregarded the vertical incision is all sufficient for purposes of wiring the bone, and leaves a smaller and perhaps a better situated scar than does the transverse incision; but to my mind the capsule is all important, and the incision through the skin should be made to facilitate getting at it for the purpose of suturing it. In a fracture due to direct violence, be it simple or compound, the vertical incision may be sufficient, for in such a case the rupture of the capsule is insignificant; but in a fracture from muscular violence the transverse incision will be necessary, as the capsule in that class of cases is widely ruptured." At the conclusion of his paper Dr Fuller says, "The secret of success in these cases, and I think the remark is applicable to all surgery, instances of pure luck being excepted, is antiseptic surgery in the true sense of the term, and in detail especially."

CASE OF TRAUMATIC TETANUS SUCCESSFULLY TREATED BY CALABAR BEAN.—Dr M'Shane of Carmel, Indiana, reports this case in the *Philadelphia Medical and Surgical Reporter.* The patient, æt. 21, received an injury of the little finger of the hand. Three weeks afterwards he began to complain of stiffness of the jaw, and rapidly the whole body became affected. Dr M'Shane's treatment of the case was as follows. On the second day of the disease I commenced the administration, hypodermically, of ½ gr. extract physostigma every hour and a half. I increased the dose both in size and frequency, until on the fourth day I gave ¾ grs. every half hour. From this I could notice no effect, and having only a 16 grain solution of the extract, I gave it by the mouth, still increasing the dose until 10 grain doses of the extract were given. Not being satisfied with the results, I procured the Calabar bean as fresh as possible, and gave of the powdered kernel 5 grains, increasing the dose every two hours. On the eighth day of the disease the dose was 20 grains, and I could notice a slight abatement of the symptoms. On the sixteenth day of the disease the dose given was 25 grs. every two hours, and the average frequency of the paroxysms ten minutes. Although there was evidence of improvement in my case, I began to doubt the improvement being due to the effect of the drug, and discontinued the use of it with a view of using something else. The result in six hours was—increased violence and frequency of the paroxysms, the average frequency being at this time three minutes. I need not say that my confidence in the remedy was also increased. I immediately gave a 30 grain dose of the powdered bean, to be repeated every two hours. Five hours later I called and was delighted to find my patient restored to about the same condition that he was in before the experiment. From this time on he continued to improve slowly, and on the 6th day of October the paroxysms, which had become very mild, ceased to recur, and the rigidity of the muscles had almost subsided. The whole amount of physostigma given from first to last was, of the extract 60 grs., and of the powdered beans, procured of Sutphen & Co., of Noblesville, Ind., eight ounces, and of Ward Bros., of Indianapolis, sixteen ounces, making twenty-four ounces of the beans, all of which was taken by my patient in six weeks, the doses ranging from 15 to 30 grs.

Part Fifth.

MEDICAL NEWS.

UNIVERSITY OF EDINBURGH.—The following candidates have passed the undernoted examinations held during the month of April :—*First Professional Examination.*—C. M. Allan, C. A. Anderson, D. H. Anderson, J. J. André, Alexander Asher, Benjamin Barnard, W. T. Beatton, Walter Bell, William Bell, W. W. O. Beveridge, H. L.

Blacklaw, W. S. Bower, C. W. Brown, J. L. Brown, John Bruce, F. O. Buckland (B.A.), A. E. Bullock, M. B. Burton, Peter Cairns, James Cameron, L. B. Christian, J. M. Clarke, A. E. Cox, H. B. Densham (with distinction), Duncan Drummond, E. H. Ezard, A. D. Fleming, R. S. Forrest, S. C. Fowler, D. A. Fraser, W. M. Gabriel, T. H. Gee, F. S. Genney, J. A. Gibson, R. W. Gibson, A. L. Gillespie, George F. Grant, John Grant, Abernethy; S. E. Greg, Curt Grobbelaar, George Hall, George Hardyman, Charles Harvey, George Harwood, C. W. Hayward, G. S. Hicks, R. N. Highmoor, F. R. B. Hinde, F. A. Holmden, J. R. Holmes, Andrew Hostage, J. R. Hutton, Thomas Ireland, F. A. Juckes, William Kemp, H. R. Kenwood, Geo. Knowles, J. W. Lewis, W. J. Lewis, Frank Liddell, J. R. Lownds, John M'Andrew, John Macdonald, G. S. Macgregor, Henry Mackay, W. A. Macintosh, D. M. Maclachlan, A. A. Macleod, H. W. G. Macleod, John M'Naughton, W. G. Macpherson, W. P. Magee, Alfred Mann, Alan Matheson, S. W. Mathias, T. G. Meikle, Thomas Meiring, A. van der Merwe, J. G. Moffat, James Moir, H. M. Montgomery, T. L. Morgan, F. H. Morison, R. H. Morrison, P. R. Murison, M. F. X. Nalletamby, W. S. Nason, A. B. Northcote, G. J. L. O'Neill, William O'Rourke, J. C. Palmer, W. B. Paterson, S. C. Paton, H. N. Pelly, J. A. Perez, A. F. R. Platt, J. F. Pridie, G. M. Rae, C. Reid, Henry Robinson, A. R. Russell, J. S. R. Russell, G. S. Samuelson, H. C. L. Scofield, Walter Scott, L. Segol, W. A. Simpson, J. H. Slayter, H. M. Smellie, C. A. C. Smelt, Frederick Smith, Thomas Smith, W. C. Sprague, C. D. Stewart, Charles Stewart, James Taylor, W. R. Taylor, Alexander Thomson, Alexander Thomson, G. R. Thomson, T. H. Underhill, A. D. Vardon, A. H. Vassie, Thomas Walcot, E. D. Wellburn, P. J. White, George Wilson, O. R. M. Wood, and M. C. Wright. *Second Professional Examination.*—A. R. Aldridge, James Anderson, J. A. Ashcroft, J. M. Balfour (with distinction), H. L. Barker, T. W. Bell, R. N. Bell, Robert Beveridge, F. M. Blumer, G. L. Bonnar, L. J. H. Bouchet, Alex. Brewster, Harbit Brown, A. J. A. Campbell, Edward Chamberlayne, P. B. Chetti, E. W. Clarke (B.Sc.), F. G. Clemow (with distinction), F. W. Collinson (with distinction), J. F. Cownie, A. J. Cross, C. S. Davies, J. H. Dawe, Jules Delépine, K. M. Douglas (with distinction), D. R. Dow, Thomas Duncan, W. M. Eaton, Thomas Edwards, William Elder, T. L. Ferrier, L. G. Fischer, David Fraser, E. S. Fry (with distinction), Robert Fullerton, J. E. Gemmell, J. G. Glover, G. R. Goodall, Robert Gordon, T. H. Griffith, Benjamin Griffiths, Joseph Griffiths (with distinction), F. O. Guérin, G. L. Gulland, J. A. Guthrie, J. H. Helm, W. C. Helme, W. H. Hill, Herbert Hirst, W. E. Home, A. W. Hughes, Samuel Hughes, James Hunter, James Hutcheson, G. F. Johnston, T. J. Jones, R. C. Joyce, Arwid Kellgren, F. T. King (with distinction), F. H. Knaggs, Francis Kraemer, J. C. Lamont (with distinction), A. W. M. Leicester, L. H. Le Merle, W. M. Little, Duncan M'Diarmid, H. C. M'Ewen, J. M. Maclennan, R. C. Macwatt, D. G. Marshall, D. J. Mason, R. T. Meadows, C. H. Melville, William Miller, C. J. Morton, Edwin Morton, A. W. Nash, Glenmore Ozanne (with distinction), Alex. Paterson, Ian Paterson, M. G. Pereira, H. H. Pridie, E. E. Pringle, E. T. Pritchard, Ernest Roberton, G. M. Robertson, G. A. Scott, K. M. Scott, John Simpson, Thos. Slingsby-Tanner, G. R. Smeits, G. L. Somerville, W. C. Spiller, W. H. G. Stephen, Robert Stirling, R. C. Strode, James Stuart, W. G. Sym, J. R. Talbot, J. W. Talent, Caleb Terrey, W. E. Thomas, J. T. Thompson, Alfred Turner, J. C. S. Vaughan (with distinction), S. T. Vine, David Walker, D. H. Walsh, P. E. Warburton, John Warnock, F. E. Welby, W. J. Will, A. B. Winder, W. S. R. Woodforde, Henry Worsley.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH. — The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sittings held from 28th April to 5th May 1884, and were admitted L.R.C.P. Ed., and L.R.C.S. Ed. :—George Todd, London; Charles Burland, Shanklin, Isle of Wight; Frank Laird, Crathie, Aberdeenshire; Frederick William Salter, Chester; Lewis Gordon Lawson, Achnagallen, Grantown-on-Spey; John Scott Haldane, Oxford; Ernest Evan Llewellyn, London; John Leslie Clarke Cox, London; Richard James Sadleir Wheeler, Clonakilty, Co. Cork; Sydney Morse, Crewkerne, Somerset; Hugh St David Griffiths, Cheltenham; Heather Bigg, London; Robert Balfour Graham, St Boswells; Cyril Somerset Earle, Manchester; Herbert William Gibbs Doyne, Bournemouth; James Joseph Wandlass Pearcey, Southwick, Durham; Michael Donville Hart, Jamaica; Alfred E. Drury, Dublin; Harold Arthur Tuxford, Boston, Lincolnshire; John Joseph M'Nulty, Loughglynn, Co. Roscommon; Alexander M'Kerlie, Aintree, Liverpool; Edward Campbell Hearne, Ballinrobe, Co. Mayo; Alexander Ernest George Langschmidt, Edinburgh; Hugh Griffith Hughes, Holyhead; Henry Goodwyn, Edinburgh; Percy Sprague Oram, London; George Vincent Fourquemin, N. Durham; Richard Hugh Brew, London; William Griffith Evans, Edinburgh; Philip Edmund Perot, Edinburgh; Walter Wignall, Sheffield; Thomas J. Randolph Clarkson, Pateley Bridge, Yorkshire; Griffith G. Jones, Amlwch, Anglesea; Francis William Robert Scott, Hillsborough, Co. Down; John Francis Thomson, Edinburgh; Bouverie Francis Primrose M'Donald, Trinity; John Nicholson Constable, Moylough, Co. Galway; John Kenaz Goodall, Nottingham; Colin C. M'Farlane, Gillingham, Kent; Crosbie B. Bagnall Harvey, Dublin; John Thomas Jones, Holywell, North Wales; John Williams Jones, Mountain Ash, South Wales; Evan Jones, Llandilo, South Wales; James Warnock Elliott, Belfast; Arthur Edward Newbury Browne, London; George M'Clean, Ballybay, Co. Monaghan; Henry William Faulkner, Southwark; William Gregory Davies, London; William Dishrow Brydone-Jack, Edinburgh; Samuel James Camac, Ballymoney; Thomas Kean, Galway; William Park Lynn, Coleraine, Derry; John W. Speer, Belfast; George William O'Flaherty, Killough, Co. Down; Vincent O. Taylor, Edinburgh; David Gilbert Donaldson, Edinburgh; Charles Alfred Mitchell, Dewsbury, York.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination at the sittings held on the 8th May 1884, and were admitted L.R.C.P. Ed.:—Harry Lyon Smith, Glasgow; Robert Percy Wilde, Bootle, Lancashire; Frederick John Ingoldby, Wimbledon, Surrey; John Usherwood Bolton, London; Trevor William Wynn Williams, London; Frederick George Harvey, Spalding, Lincolnshire; Tom George Johnson, Hughington, Lincolnshire; George Herbert Johnson, London; James Edlington M'Dougall, Liverpool; Theodore Selby Caverton, London; Alfred Kirby, London; James Francis Halland Owen, Ramhill, near Prescot; Charles George Grimmer, Bungay, Suffolk; George Wyld, Edinburgh; Robert Jones, Liverpool; Reginald William Wilson, Rotherhithe; Henry Mackford Baylis, Southport.

THE COUNCIL OF THE CREMATION SOCIETY OF ENGLAND purchased in 1878 a freehold site at St John's, Woking, in Surrey, and erected thereon a Crematorium with apparatus of the most approved kind, which they tested by experiment, and found to be satisfactory in the highest degree. Since that time the place has been maintained in perfect order, but has not been used, owing to a doubt as to the legality of cremation in this country. That doubt, however, has now been removed by a recent decision of Mr Justice Stephen. In these circumstances, the Cremation Society wish it to be known that, while reserving to themselves the right to refuse, in any case, permission for the performance of cremation, they will not consider any application unless under the following conditions:—1. An application in writing must be made by the friends or executors of the deceased,—unless it has been made by the deceased person himself during life,—stating that it was the wish of the deceased to be cremated after death. 2. A certificate must be sent in by one qualified medical man at least, who attended the deceased until the time of death, unhesitatingly stating that the cause of death was natural, and what that cause was. 3. If no medical man attended during the illness, an autopsy must be made by a medical officer appointed by the Society, or no cremation can take place.

NEW INVENTIONS.

Urinary Test Papers: including the Reagents recently introduced for the Detection of Traces of Albumen and Sugar, prepared for the Use of Physicians. By Parke, Davies, & Co., America.

THERE has recently been prepared by Messrs Parke, Davies, & Co., of America, a "Pocket Case" containing all the reagents likely to be of service in making an examination of urine at the bedside of the patient. This case has been constructed from a suggestion thrown out by Dr Oliver of Harrogate, who propounded the idea that slips of paper might be impregnated with the various reagents employed in these tests, and that the physician had only to use them to discover the condition of the urine in any particular case, just as the chemist discovers the presence of an acid by means of the well-known blue litmus paper. The idea of Dr Oliver is an excellent one, and that it is thoroughly practicable has been conclusively proved by this little pocket case of test papers by Parke, Davies, & Co.

The case contains in all nine different kinds of paper so saturated as to answer the purpose of testing for the abnormalities usually found in urine. 1. Litmus of a neutral shade, and thus serving either as tests for acidity or alkalinity of the urine. 2. Potassium ferrocyanide. 3. Sodium tungstate. 4. Indigo. 5. Citric acid 6. Potassio-mercuric iodide. 7. Picric acid. 8. Sodium carbonate. 9. Copper test.

To test for albumen. Either picric acid, sodium tungstate, potassium ferrocyanide, or potassio-mercuric iodide in conjunction with citric acid, will precipitate albumen. Drop into a test tube or vial containing thirty minims of the urine, a citric acid paper together with one of either the other reagents named. As the reagents become dissolved, the urine becomes cloudy in proportion to the amount of albumen present.

To test for sugar. Put into a test tube containing thirty minims of the urine, one of the test papers marked "copper test," and heat gradually to boiling. If sugar is present the usual reduction takes place. Or use one picric acid paper, and one carbonate of sodium paper; heat to boiling, and boil a few minutes. If sugar is present the urine assumes a dark colour, as in Moore's test. Indigo test for sugar. Put into a test tube thirty minims of water, with an indigo and a sodium carbonate paper. Heat to boiling, and add one or two drops of the urine. If sugar is present the solution changes from blue to violet, fading to a pale yellow tint as the mixture is boiled. The quantity of sugar may be judged by the rapidity of change.

These papers are admirably adapted for the purpose for which they are intended, and will undoubtedly prove a great advantage to the medical profession.

OBITUARY.

PROFESSOR ALLEN THOMSON.

THE death of Allen Thomson will cause widespread regret, and will awaken among a very large number of former pupils, now scattered over the world, many memories of the time when they were privileged to be under his tuition. Successively Lecturer on Physiology in the Edinburgh Extra-mural School, Professor of Anatomy in Aberdeen, Professor of Physiology in Edinburgh, and finally Professor of Anatomy in Glasgow, Dr Allen Thomson has occupied positions unprecedented in variety, and has had a career which in length, usefulness, influence, and honour, it has been given to few men to enjoy.

Born 2nd April 1809, he had attained the ripe age of 75 when his death took place on 22nd March 1884. He was the son of Dr John Thomson, the eminent Professor of General Pathology in the University of Edinburgh, a man of remarkable career, a native of Paisley, who, by his natural ability and extraordinary activities, raised himself, in the field offered by the Edinburgh Extra-mural School, to the highest position among the pathologists and physicians of the day,—a man to whom the progress of rational medicine and, it may be added, political liberty in Scotland owed much. He died in 1846, in the 82nd year of his age. It was a great deal to be the son of such a man. Allen Thomson's mother was a daughter of John Millar, Professor of Law in Glasgow University. He had thus parental relations both with Edinburgh and Glasgow Universities. He was named after John Allen, a firm ally of John Thomson, also a man of extraordinary powers, who lectured for some years on physiology in the Edinburgh Extra-mural School, and afterwards went into political and literary life as private secretary and confidential friend of Lord Holland.

With such a father and such surroundings, Allen Thomson was sure to have the best upbringing and best direction. For his boy-education he was sent to the Edinburgh High School, and thereafter was put to the study of medicine in the University and Extra-mural School under his father's guidance. Before graduating he studied for some time in Paris. He graduated as M.D. of the University of Edinburgh in August 1830. He would then be only 21 years of age. The fact that his father should before that early age have ventured to send him to Paris may be taken as a proof of his confidence in the stability of his son's character.

Allen Thomson now turned his thoughts to becoming a teacher, for which, no doubt, his father had intended him. Except the philosophical teaching of Alison, then Professor of Physiology, there had not been much in the University at that time to inspire a young man. The third Monro in anatomy, and others not much better, were droning away; but in the Extra-mural School, among others, there were the eloquent Robert Knox, *facile princeps* in Anatomy, and in Surgical Anatomy and Surgery there were Liston and Syme, and a galaxy of teachers in other subjects, who ably sustained the reputation of the School. In 1831-32, the year following his graduation, Allen Thomson began as Lecturer on Physiology, and to some extent on Anatomy, associated with his friend Dr Sharpey, who taught anatomy. It was not till 1838 that the College of Surgeons finally refused to recognise any teacher for more than one of the subjects included in the curriculum. In the University the courses of Anatomy and Physiology had always been separate, but this had little influence on the arrangements of the Extra-mural School, as the University did not at that time, nor for long afterwards, recognise extra-mural courses. But John Allen had given courses of Physiology with great acceptance, and after him John Gordon, after teaching the two subjects together for a couple of years (1808-1810), gave a course of Physiology separate from his course of Anatomy, either in the winter evenings or in the summer session. He died 13 years before Allen Thomson began as lecturer. What Allen Thomson taught may be best given in his own words, written three years ago, "Sharpey and I lectured together at No. 9 Surgeons' Square from 1831 till the summer of 1836, when I left on account of my health being rather impaired. He taught the Anatomy and I the Physiology; but in the later years, as my father urged me very much to prepare myself for Anatomy, I took a share in the Anatomy teaching by attending in the dissecting-room and giving some demonstrations." In the same letter he says, referring to Gordon, "I am especially pleased with your recognition of John Gordon's character and work, which is not only perfectly true as regards himself, but gives some indication of the influence which my father exercised upon his pupils and the School of Edinburgh. I have still all Gordon's papers, as well as John Allen's, and some day I should be very glad to show you them." That writing bears the date, March 1881, and beside it is another bearing the date April 1842, both in precisely the same hand. The writing of nearly every one varies with pen, or haste, or age, but Allen Thomson's (and his writing must be in the possession of thousands of his old pupils), to the wonder of his friends, never varied, always in the same well-formed beautiful character.

In the summer of 1836 Dr Sharpey left for the Chair of Anatomy and Physiology in University College, London, carrying with him to London the thoroughness of Scottish teaching. He had been one of the young men in Edinburgh who owed their direction and inspiration to John Thomson, and this debt he repaid to his son Allen, over whom he exercised a strong influence in their close and life-long friendship. When Sharpey left Edinburgh in 1836, Allen Thomson relinquished teaching for some years, partly on account of his health, and, as travelling physician with the Bedford family, spent most of the time on the Continent. The familiarity which he thus acquired with modern languages, at a time when it was not so customary as now among the medical youth of this country to acquire especially the German tongue, was of great service in his after career, and no less so what he saw of the scientific men and methods of the Continent.

In 1839 he was appointed Professor of Anatomy in Marischal College and University of Aberdeen. Previous to this there had been only lectureships on Anatomy in Aberdeen. The arrangement now made, it is understood partly by the great influence of John Thomson with the Government, was the foundation of Chairs of Anatomy and Surgery in Aberdeen,—Dr Pirrie, Lecturer on Anatomy, becoming Professor of Surgery, and Dr Allen Thomson becoming Professor of Anatomy. What would now seem an extraordinary step, his return to Edinburgh, which took place in the autumn of 1841, to resume as extra-mural lecturer, is not difficult to understand. The number of students of medicine in Aberdeen at that time was not great, but the chief reason, no doubt, was that the Chair of Physiology in Edinburgh, the object of his laudable ambition, was expected to become vacant soon by the transference of Dr Alison to the Chair of Practice of Medicine.

Allen Thomson's recommencement in Edinburgh was made at No. 1 Surgeons' Square, the rooms which had been occupied by Dr Alex. J. Lizars, Lecturer on Anatomy, who was appointed to succeed Dr Thomson as Professor in Aberdeen. Besides Monro *tertius* in the University, there were at this time lecturing on Anatomy in the Extra-mural School,—Knox at 11 Argyle Square, and Dr James Mercer at 4 Surgeons' Square. Of the four schools, that of Allen Thomson was, it is believed, the largest, and was certainly the best conducted. Yet it numbered only about 120 students, so low in numbers had the Edinburgh School at that time fallen under the blighting influence of forty years of the third Monro in the University. At one time Knox had a class of from 400 to 500 as extra-mural lecturer, but that brilliant and erratic genius was now in much less repute. The students in these extra-mural classes were mostly University students, obliged to take Monro, but attending the extra-mural courses also for the knowledge they could not get in the University. In that session, 1841–42, Dr Thomson gave both the systematic lectures at 11 o'clock, and the lecture-room demonstration at 1 o'clock. He also taught in the dissecting-room, assisted by his demonstrators, the chief of whom was Dr Gunning, who had accompanied him from Aberdeen, and who is still among us in honoured retirement. Allen Thomson's lectures on Anatomy were of a high order scientifically, and also in style contrasted favourably with the teaching in the other schools. His favourite subject was embryology. That could not come in much in the ordinary course, but in the summer of 1842 he delivered a special course of lectures on Development, in which he gave the results of his own researches, as well as those of the German observers. These lectures were illustrated by a very large number of beautiful diagrams, and were attended by many members of the medical profession of Edinburgh. His graduation thesis had been on the development of the heart and great bloodvessels in the vertebrata, showing an early direction of his mind to the subject of embryology. In that summer session he gave also a course of weekly lectures on the new Microscopic Anatomy, which followed the publication of the great work of Schwann. In these lectures we heard much of Schwann, Henle, and Kölliker, the latter of whom became his intimate and life-long friend. To this time the microscope had not been much used in the school. The cell doctrine of Schwann had cleared up the confusion of the old general anatomy, although the revolution it was to effect in biology, in relation to the evolution as well as to the structure of organic forms, was hardly foreseen. Knox, whose forte was Comparative Anatomy and its bearing on human Anatomy, was satirizing the microscope, as he did most things. Sharpey had been using it in the investigation of ciliary motion. John Goodsir, conservator of the large and valuable anatomical and pathological Museum of the College of Surgeons, gave a few original lectures to the Fellows of the Colleges on cells, and on his germinal centres; and Allen Thomson used it in his researches on development. But then, and for years afterwards, the student had nothing of the microscope, beyond the privilege of a peep through Allen Thomson's and John Goodsir's on a Saturday. The work which Allen Thomson did during this year in Edinburgh secured the success of his subsequent career. His abilities as a teacher and observer were fully recognised by the medical profession of Edinburgh.

The expected vacancy in the Chair of Physiology in the University took place in the summer of 1842. The only serious rival to Allen Thomson among the candidates was Dr John Reid, who had been Demonstrator of Anatomy with Knox, Pathologist to the Infirmary, and Lecturer on Physiology in the Extra-mural School, and for a short time Professor of Anatomy and Physiology in the University of St Andrews. Those who knew John Reid, his solid qualities, the high rank his researches had already given him among physiologists, and the respect in which he, no less than Allen Thomson, was held, can understand how painful must have been the duty which devolved on the Town Council of Edinburgh of deciding between two such men. The appointment fell to Allen Thomson. For six years, till his transference to the Chair of Anatomy in Glasgow in 1848, Allen Thomson filled with distinction the Chair of Physiology, or, as it is still sometimes called, "Institutes of Medicine," in Edinburgh. His predecessor, the philosophical and universally-beloved Alison, who had filled the chair for twenty-one years, had approached the subject from the physician's point of view, as his *Outlines of Physiology* may show, he being at the same time engaged in clinical teaching, and in a wide consulting practice. Allen Thomson, devoting himself entirely to the subject, made the course one of Physiology proper, systematic and complete. His familiarity with what was being done in Germany and France gave breadth and thoroughness to his teaching. His habit was, on debatable points, to give the views of observers on opposite sides, and not unfrequently it was somewhat tantalizing not to learn at the end what his own view was. Besides his numerous wall-diagrams, he took great pains in making sketches, and writing heads of the lecture, on the black-boards before lecture, but, though an excellent draughtsman, he did not waste the time of the class with much drawing during lecture. He did not read his lectures, but had notes before him, containing the heads of the lecture. His course altogether was one that must have cost him a great deal of labour from day to day. *Carpenter's Physiology* was then the text-book of the ordinary student; *Müller's Physiology*, in two thick closely-printed volumes, that of the more arduous members of the class. Dr Thomson began a text-book for the use of his pupils (*Outlines of Physiology*, Edin., 1848), but in consequence of his removal to the Glasgow Chair of Anatomy, it did not go farther than the first part.

It may serve to show how political connexion at that time bore on the chances of even scientific appointments, to mention that it was for years an accepted belief that when the Glasgow Chair of Anatomy fell vacant, it would go to Allen Thomson or to John Reid, according as the Government of the day was Whig or Tory. But the fatal disease which had meanwhile laid its hand so sadly on Reid put an end to that doubt. When old Dr Jeffray at last vacated, the chair was, with universal approval, given to Allen Thomson. This was to be his last move.

Allen Thomson filled the Chair of Anatomy in the University of Glasgow for the long period of twenty-nine years. The work he accomplished there, besides his continued contributions to the progress of science, may be said to have been of two kinds,—one, the introduction of the modern anatomy and methods of teaching by which he laid the foundation of the eminence and success which the Glasgow School of Medicine has since attained, an object which he had warmly at heart; the other, also contributing to that end, the planning and erection of the new University buildings, in which great undertaking he was the moving spirit. Succeeding old Dr Jeffray, who had held the Chair of Anatomy for fifty-eight years, a period almost incredible did not the dates (1790-1848) assure us, it may be readily believed that Allen Thomson's anatomy and method were a new revelation in the old monastic buildings. As in Edinburgh, when the third Monro at last, in 1846, made way for John Goodsir, the tide turned from the Extra-mural School to the University, and the Glasgow School of Medicine began to take the high rank to which the new colleagues who gradually gathered round him have contributed their part.

From 1863, when the old College buildings were at last disposed of to a railway company, to 1870, when the classes met for the first time in the new buildings on Gilmorehill, Dr Thomson, as chairman of the Removal and Buildings Committee, was largely occupied with the anxieties and plans connected with that great undertaking. A judgment may be formed of the magnitude of that work, when it is remembered that besides the sum of £117,000 obtained on account of the old buildings, a sum of no less than £164,000 was subscribed mainly by the citizens of Glasgow, and £120,000 contributed from the National Treasury. Dr Thomson's head was so full of measurements at this time that it was amusing to see him guessing at the size of your room, and getting up to pace it to show you he was right. His services in this great work, and otherwise for the University, were recognised, on his retirement from the chair, by the presentation of his portrait, painted by Sir Daniel Macnee, which now hangs in the Hunterian Museum of the University. A replica of the portrait was presented to Mrs Thomson. Dr Thomson took the same active part in the planning and erection of the new Infirmary, the Western, beside the new University buildings, the funds for which were mainly contributed by public subscription in Glasgow. The Western Infirmary is considered quite a model hospital, and has recently been greatly enlarged. When Dr Thomson retired from the chair in 1877, it was with great satisfaction that he regarded the realization of these two great undertakings, and saw the success of the Medical School which he had done so much to develop. He was worthily and deservedly succeeded by Dr John Cleland, then Professor of Anatomy in Galway, who had been for a number of years Dr Thomson's chief assistant in Glasgow University.

It would not be easy to give a sufficient appreciation of Dr Thomson's numerous contributions to Anatomy and Physiology. The list appended to this notice will show their number and variety. His earlier papers were on Embryology, which continued to be the favourite subject of his study and researches. His articles "Circulation" (1836), "Generation" (1839), and "Ovum" (1859), in Todd's *Cyclopedia of Anatomy and Physiology*, are perhaps those by which he is best known to a large circle of readers. They are all comprehensive accounts, ranging through the animal kingdom, of the past and present views entertained on the subjects treated. The "Ovum" is an elaborate article of 142 closely printed pages, profusely illustrated, and had been long looked for. Besides showing a large amount of study and careful rendering, it contains much original matter, and was probably regarded by him as his most important contribution. Dr Thomson was a good deal occupied with the share he took in the three last editions, the seventh, eighth, and ninth, of the well-known, if now somewhat overgrown, text-book, *Quain's Elements of Anatomy*. The already high character of the work, due to the accuracy of Mr Ellis, the surgical anatomy of Mr Quain, and the reliable microscopic anatomy of Dr Sharpey, was greatly enhanced by the recognition of homology and embryology, which made their appearance in it when Dr Thomson became one of the editors along with Dr Cleland. It was only on the remonstrance of a friend that Dr Thomson was induced to do himself the justice, in the eighth edition, of putting his initials to many of the new illustrations, and at the same time to bring the previously scattered fragments of embryology together in a special section, so as to give a connected view of the subject. This section of the work now forms, by itself, an excellent systematic summary of development, and is valuable as being by one who had long been the chief authority among British embryologists.

Dr Thomson occupied positions of high honour in the British Association for the Advancement of Science. At the meeting in 1871, at Edinburgh, he was president of the Biological Section; at the meeting of 1876, at Glasgow, he was one of the vice-presidents of the Association; and at the meeting of 1877, at Plymouth, he was president of the Association. In his address, in 1871, he reviewed the progress of biological science within his own recollection. For his presidential address, in 1877, he took the subject of the "Development of the Forms of Animal Life." Both of these addresses will repay perusal, containing as they do the careful expression of the fruits of wide study.

Dr Thomson likewise took his full share of work in questions connected with medical education and university improvement. He was, from its beginning, in 1859, to the time of his retirement, a period of eighteen years, a member of the General Council of Medical Education and Registration, sitting as the member elected jointly by the Universities of Glasgow and St Andrews. He sat for four years in the University Court of the University of Glasgow, as the assessor elected by the Senatus Academicus. He gave evidence at considerable length before the Royal Commission on Scientific Instruction in 1872, and before the Royal Commission appointed in 1876 to inquire into the Universities of Scotland. In traversing before these commissions the whole subject of education and graduation in arts, science, and medicine, the views which he expressed are valuable as containing the fruits of long experience, and unbiassed by personal interest, as he was already contemplating retirement from his chair; valuable also as the views of one who was exceedingly cautious in forming and in expressing opinions. His strong opinion against making Latin and Greek a necessary basis of liberal general education is interesting as coming from one who had sat in the Senates of three Universities. "It is the traditional system which prevails in this country to a great degree, and men have not yet opened their eyes, I think, sufficiently to the great difference amongst persons." "Under any system I would wish to see the greatest latitude." (Report of Science Commission, vol. ii., 1874.)

Dr Thomson filled the offices of President of the Medico-Chirurgical and Philosophical Societies of Glasgow, and of the Association which was formed for the delivery of Science lectures in Glasgow. He was a Fellow of the Royal Societies of Edinburgh (1838), and of London (1848), of which latter Society he became one of the vice-presidents after his retirement and removal to London. Various Universities, Edinburgh (1871), Glasgow (1877), Oxford (1882), conferred on him honorary degrees, and, it may be said, conferred honour on themselves by doing so.

Throughout his long and varied career of office as a teacher, worker in science, and man of affairs, Allen Thomson exhibited the same characteristics. He was studious, careful to precision, sensitively cautious, upright, considerate of others, and gentle. He took a great deal of trouble in preparing for probably every lecture he gave. In at least his earlier period, as lecturer and professor in Edinburgh, every lecture seemed as much a matter of anxiety to him as, perhaps, the introductory lecture of the course is to most men. He was scrupulously careful to do justice to others in his lectures as well as in his papers. His aim, in his lectures, was to give a faithful account of what was known, not a mere sufficiency for a pass examination. Allen Thomson giving a grinding lecture, with tips for a minimum pass examination, is a thing not conceivable. How this higher teaching would have fared in schools where the method just referred to prevails, and where the teacher is not also one of the examiners, is doubtful. The ease with which he expressed himself, and the methodical arrangement, gave clearness to his lectures, while the extreme propriety of his language and the gravity of his manner, as well as the quality of the matter, gave them dignity. With such teaching he had the respect and attention of the class. If an idler required a hint, as will happen under the best teaching, it was only by a visible effort that Allen Thomson administered the simple rebuke of, "Sir, I have to request your attention." No visible inattention or impropriety of any kind was allowed in the class. Occasionally, but rarely, he bestowed a little grave satire on pretenders, the spiritualists among others. The one annually recurring occasion on which even his gravity broke down, was the laughter with which the classes in the Edinburgh School at that time, whether without or within the walls, invariably greeted the mention of the foramen of Monro. The endeavour of *Tertius* himself to escape this by calling it "my father's hole," did not lessen the outbreak.

As an observer, Allen Thomson did a large amount of work. He probably spent much time in looking into what had been stated by others, so as to see it in nature and be assured of it; while by his own numerous observations, especially in Embryology, and in his record of interesting varieties in developed structure, he added many facts to the sum of anatomical and physiological knowledge. In one of the obituary notices that have appeared, it is said that his observations were morphological rather than physiological, that "he was from the beginning of his scientific career (unconsciously it may be said) a Darwinian of the best type" (*The Lancet*, April 12th). That depends on what is meant, and goes to the secret springs of a biologist's whole work and teaching. Before Allen Thomson's time there had been, in Edinburgh, Barclay devoting himself to Anatomy, human and comparative (1797-1825), in whose class Owen had his first inspiration in the homologies. During Allen Thomson's time, there was Barclay's successor, Knox (1725-1845), speaking much of Cuvier and Geoffroy St Hilaire, making easy game of the Bridgewater Treatises, pointing out the small diameter of the whale's throat, and the like; and, long before, there had been the speculations of Oken, Goethe, and Lamarck. But during his Edinburgh period, Allen Thomson's point of view was essentially physiological (not morphological, in the sense of homological), and his embryology was the careful record of facts, the mere facts being regarded with great interest. If anybody in the Edinburgh School at that time doubted that every one of the multitude of so-called species had come into being independently, as adults (nobody inquired how), we never heard of it. The facts which Allen Thomson and others were revealing were to form part of the evidence on which the genius of Charles Darwin was afterwards to found the great hypothesis, but at that time there was no hypothesis. Even when the great hypothesis came in 1859, so cautious was Allen Thomson (he was constitutionally cautious, even to over-caution), that it was difficult for a time to know how he regarded it. The advance which his mind underwent in this respect may be seen by comparing his British Association addresses of 1871 and 1877, not committing himself in the former, and in the latter making a full acknowledgment of the reasonableness of the great change of view which the evolution hypothesis had accomplished. Allowance (not always made by the younger men) has to be made for the difficulty experienced by those who had been taught, and had themselves taught, the old notions about species and the old teleology, for the mental change to be undergone was great, and it is noteworthy that a mind so long accustomed to the older views, so careful as to facts, so little prone to theory, and so cautious in all things as Allen Thomson's, should have undergone that change.

In his social relations Allen Thomson appeared to the ordinary observer a man of reserved and diffident nature, but always courteous and gentle in manner. With his more intimate friends he opened out more, and showed considerable appreciation of humour. He had plenty of stories to tell of Knox and Monro, and other characters in his old Edinburgh days. In the words of a writer in the *Glasgow Herald*, who had evidently seen much of Dr Thomson's daily life in his latter Glasgow years,—"In the social circle there was much gentleness and simplicity of manner, along with a keen sense of humour. It would be impertinent to say anything more of his domestic life than that it was characterized by a quiet kindliness and that chivalrous attention to little details of personal courtesy which mark the true gentleman. His qualities of head and heart, however, do not require to be set forth. Although his finely moulded and venerable countenance has not lately been familiar in our streets and public meetings, the intelligence of his death will bring back a sense of loss, and will recall the well-known face and form. It is difficult to imagine that the bright, keen intelligence, so alive to all that pertains to progress in knowledge and to the welfare of humanity, is now no longer with us; but his memory will long remain in Glasgow, and in the hearts of thousands of his pupils. He has died full of years and of honour, and it is a satisfaction to think that after a long and busy life of active labour he had a few years of peaceful retirement, listening to the innocent prattle of his grandchildren, and enjoying in London the society of kindred scientific spirits."

While enjoying his well-earned leisure in London, various scientific societies had the benefit of his attendance and counsel, and, among other things, he took a general superintendence of the preparation of the ninth edition of *Quain's Anatomy.* He was present at the International Medical Congress which met in London in 1881, when many old pupils were glad to see him looking so fresh. His friend Kölliker was his guest on that occasion, and both took an active part in the Anatomical Section of the Congress.

The following account of the illness which cut him off is given in *The Lancet* of April 12th, by one whose information renders it authentic:—" Up to within four months of his death Dr Thomson appeared to be in excellent health. Last year he went with Mrs Thomson to Cannes, on Jan. 3rd, and spent the cold months and spring there, and the summer was passed in the West-Highlands of Scotland, with much pleasure in revisiting scenes with which he had been so familiar in earlier days. Suddenly, on December 14th, from his house in London, he wrote to say that his left eye had not been quite so well of late, and that Mr John Couper and Sir William Bowman both concurred in the opinion that an iridectomy should be performed without delay. Accordingly, on the following day, Mr Couper did an iridectomy on the left eye, on account of glaucoma. Nothing could have been more satisfactory than his recovery from the operation. The wound healed without pain, vision was maintained, and normal tension restored. About ten to fourteen days after the operation he began to experience lancinating pain referred to the ears and base of the skull, which he attributed to the east wind and rheumatism, as there was no change in either eye to account for the pain, and no external swelling. He woke in the morning to find that he had been struck blind of the right eye (which up till that moment had been perfect). Mr Couper saw him forthwith, and found the tension normal, that there was a considerable area of the field of vision blind, the limit coming close to the centre, and that he could only distinguish large letters. Next day the main branch of the arteria centralis was seen to be plugged with blood-clot, and the portion of vessel beyond the plug empty, and for many weeks vision was entirely lost. From this it was feared that other arteries might be similarly plugged in adjoining parts. Dr George Johnson also saw him with Mr Couper and Mr Aikin, and found the cardiac valves were sound. It was thus probable that the vessels became plugged owing to degeneration of their coats at the plugged part. Gradually the plugging process seems to have extended, and about the fourth month after the illness began some local paralyses became developed, first in the left hand thumb and forefinger, which passed away, and afterwards in the muscles of the right side of the face; the vagus also became implicated, so that hiccough was more or less constant, relieved only by chloroform. His strength was reduced by protracted suffering, and eventually breathing became obstructed. He died at 66 Palace Gardens Terrace, London, on March 22nd, 1884, in the seventy-fifth year of his age."

On the occasion of the remains leaving London for interment at Edinburgh, although the funeral was a private one, many friends met at the Euston Square Station on the 27th March. In proposing that a deputation from the Medical Council, consisting of Professor Struthers, Professor Marshall, and Dr Aquilla Smith, as representing the three divisions of the kingdom, should attend, the President, Dr Acland, remarked that "Professor Allen Thomson had long been a member of this Council, by the members of whom he had been alike respected, beloved, and lamented, while his worth was equally esteemed wherever science was known." The assemblage was an interesting one, embracing representatives of various scientific societies in London, and Scotchmen settled in London, or who happened to be in London, old pupils or colleagues, who came to pay the last mark of respect. Next day, in the presence of a large concourse of friends and former pupils, the remains of Allen Thomson were laid beside those of his brother William in the Dean Cemetery at Edinburgh, where the remains of not a few of his former colleagues and medical friends have found their resting place. Among those who were present were many members of the medical profession of Edinburgh, including the Professors in the Medical Faculty of the University, of whom the only remaining former colleague in the Edinburgh School was his life-long and attached friend Professor Douglas Maclagan. From Glasgow, the Principal and Professors of the University had come to join in the last mark of respect to their late colleague and revered friend, and the services on the occasion were conducted by the Very Rev. Principal Caird of Glasgow University.

Dr Thomson has left a widow and an only son, Mr John Millar Thomson, Lecturer on Chemistry in King's College, London, and Secretary to the Chemical Society of London.

The following is a list of Dr Allen Thomson's publications:—

In *Edinb. New Phil. Journ.*, "On the Development of the Vascular System in the Fœtus of Vertebrated Animals," 1830; "On the Coexistence of Ovigerous and Spermatic Capsules on the same Individuals of the Hydra Viridis," 1847. In *Edinb. Med. and Surg. Journ.*, On the New Experiments of Weber on the Sensibility of the Skin, 1834-5; and, On the Early Stages of the Human Ovum and Embryo, 1839. In *Edinb. Monthly Journ. of Med. Science*, On the Early Condition and Probable Origin of Double Monsters, 1844; and, Comparison of the Ovarian Ovum of Birds and Mammiferous Animals, 1855. In *Goodsir's Annals of Anat. and Phys.*, "On the Structure of the Glands of the Alimentary Canal," 1850. In *Pro. Roy. Soc. Edinb.*, Congenital Malformation of the External Ear in Three Persons, with Experiments on the State of Hearing in them, and Remarks on Hearing Through the Hard Parts of the Head, 1845. In the *Glasgow Med. Journ.*, "Dissection of a Case of Lateral Transposition of the Viscera of the Thorax and Abdomen in a Man," 1853; "Notice of Recent Researches on the Origin of Entozoa, more especially of Tape-worms," 1856; On the Structure and Action of the Parts concerned in the Focal Adjustment of the Eye, 1857; "On the Phenomena and Mechanism of the Focal Adjustment of the Eye to Distinct Vision at Different Distances," 1858; "Notice of M. E. Groux's Case of Congenital Fissure of the Sternum, with Observations on the Position and Action of the Heart," 1858; "Dissection of a Case of Right Aortic Arch, with Remarks on this and Allied Malformations," 1864. In *Proc. Phil. Soc. of Glasgow*, On the Spinal Cord and Nerves, and also on Adaptation of the Eye to Vision at Different Distances, 1864. In *Brit. Assoc. Rep.*, 1855, Contributions to the History of Fecundation in Different Animals, and, On the Formation and Structure of the Spermatozoa in Ascaris mystax. On the latter subject, also in Siebold and Kölliker's *Zeitschrift*, 1857. In *Journ. of Anat. and Phys.*, "On the Difference in the Mode of Ossification of the First and Other Metacarpal and Metatarsal Bones," 1868-69. In *Todd's Cycloped. Anat. and Phys.*, the articles "Circulation," 1836; "Generation," 1839; and "Ovum," 1859. "Outlines of Physiology," Part I., Edinb. 1848. The Section "Embryology," in *Quain's Elements of Anatomy*, 8th ed., 1876, 9th ed., 1882. In the current edition, the 9th, of the *Encycloped. Brit.*, the article "Embryology." In *Brit. Assoc. Rep.*, Address as Pres. Biolog. Section Brit. Assoc., 1871, and address "On the Development of the Forms of Animal Life," as Pres. Brit. Assoc., 1877. Revised edition of the Biog. Notice of his father, Prof. John Thomson, by Drs Craigie and Wm. Thomson, in *Edinb. Med. and Surg. Journ.* 1847; and Biog. Notice of his brother, Prof. Wm. Thomson,—both in appendix to vol. ii. of his father's "Life of Cullen," 1859. The above list is not given as complete, but is as full and as accurate as the limited time at the writer's disposal has permitted.

JOHN STRUTHERS.

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